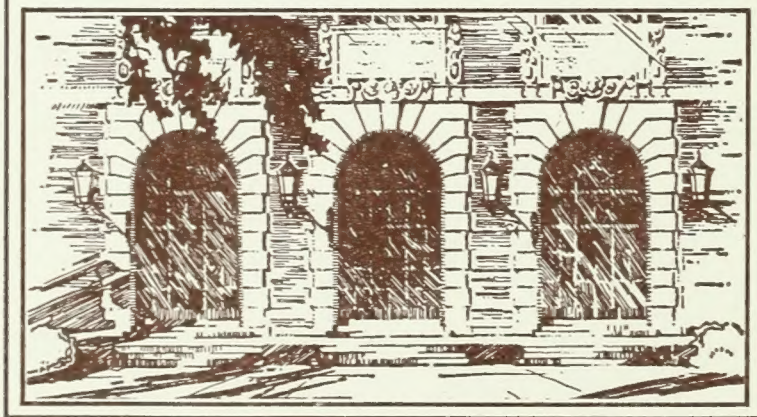


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Volume 13

Number 1

Spring and Summer, 1966

Bureau of Community Planning · University of Illinois

UNIVERSITY OF ILLINOIS

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Editorial Notes

In connection with the current program of expansion and improvement of the Digest, the editor is pleased to announce the formation of a University Advisory Committee, listed on this page. He is also pleased to announce an arrangement with Science Information Exchange, of Washington, D.C., under which current urban and regional research registered with that agency is, with the approval of the principals involved, made available to the Digest for publication. Additional information for this issue was also furnished by the Urban Land Institute.

The editor hopes to meet many past, present and perhaps future contributors in the course of an extended journey throughout the United States, Canada and Europe during the next several months. In his absence, the editorial work will be carried forward by Dr. Sozen, with the assistance of the Advisory Committee.

Beginning with this issue, the first number of a volume will be designated Spring-Summer, and the second Fall-Winter. (SK)

Founded in 1954 by an informal organization known as the Urban Planning Research Group, the Research Digest is prepared and distributed semi-annually by the Bureau of Community Planning of the University of Illinois. Its objective is to serve as a medium of communication among individuals and groups engaged in urban and regional research. Abstracts are invited covering research projects recently initiated, projects well underway on which significant progress or findings can be reported, and projects recently completed. Brief notes on items of interest to researchers in this field are also desired, as are special articles in keeping with the character of the publication. Subscription is \$4.00 per year for individuals and \$6.00 for organizations. Address all communications to Research Digest, Bureau of Community Planning, University of Illinois, 1202 West California Avenue, Urbana, Illinois 61801.

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1. COMPUTER SIMULATION OF ORGANIZATION INTERACTIONS

Main Investigators: Martin Pfaff, P. J. Robinson, J. S. Minas, M. Martin, and F. Carmone.

Status of Research and Publications: First phase completed; others in process.

Agency: The American University, in cooperation with Marketing Science Institute, Systems Development Corporation, and the Rand Corporation under sponsorship of the Social Science Research Council.

Previous Digest Report: None.

Research Problem: To study information and control requirements of managers, and to point out methods and techniques that contribute to meeting such requirements. One of the characteristics of modern management is the need to prepare plans, make decisions, and control operations under pressure of time. The information systems developed in the past to provide the inputs for these management processes are largely manual, often fail to distinguish between routine and non-routine activities, and usually consume considerable time.

Method of Study: The interaction between managers who run their simulated companies from their own offices at a leading paper manufacturing company, are studied with the aid of computer simulation programs. The information requested and used by these managers is evaluated against their performance in the pursuit of their objectives. A set of interrelated Adaptive Information and Control Schedules is being prepared. On the basis of a set of interaction models, the routine decision making sequences pertaining to specified decision areas are formulated. The sequences will provide the basis of computer-assisted scheduling of management tasks. For non-routine tasks, techniques of heuristic programming are employed. The interaction of routine schedules and heuristic programs is expected to give rise to considerable time and cost savings and improved decision-making in larger organizations. These schedules are to be tested in the simulated environment, and their contribution to improved decision-making assessed.

2. THE MARKETING FUNCTION AND ECONOMIC DEVELOPMENT: AN APPROACH TO A SYSTEMIC DECISION MODEL

Main Investigator: Martin Pfaff.

Status of Research and Publications: Model formulation and solution completed; an all-computer simulation will be used for sensitivity testing.

Agency: The American University, under sponsorship of Marketing Science Institute (Philadelphia).

Previous Digest Report: None.

Research Problem. Construction of a decision model for the long-run allocation of resources by the marketing executive at the micro-level and the development planner at the macro-level. Behavioral variables included in the system of relationships, based on a macro-functionalist view of the impact of human environment on the ultimately controlled marketing system.

Method of Study. The first part of the study takes a comparative statistical view of marketing development in relation to economic development (60 countries, 1830 to 1960). Significant correlations are found between the respective indicators. Exponential growth equations and regression equations are computed.

The second part searches for cause-effect relationships that would facilitate prediction and the consequent decision-making based on choice between alternatives. The need for a Systemic Interaction Model (SYSTIM) becomes evident from a critical evaluation of the classical school of economics, and of Marx, Schumpeter, Harrod, Domar, and latter theorists, as well as of marketing literature pertaining to economic development: these model builders consider the institutional environment either as given and favorable, or they make it dependent on changes in the economic-marketing system. Recent experience in developing countries contradicts both assumptions.

The third part focuses SYSTIM on the Indian case, and on specific problem areas, such as product introduction, free trade versus protectionism, prediction of nationalization, and the desirability of demand creation in developing countries. (MP)

3. PLANNING AND ZONING LAW AND PRACTICE IN CONNECTICUT

Main Investigators: Dennis O'Harrow, Jerome L. Kaufman, Jack Noble, and Michael J. Meshenberg.

Status of Research: In process. Completion scheduled for February, 1967.

Agency: American Society of Planning Officials, under sponsorship of the Connecticut Development Commission.

Previous Digest Report: None.

Research Problem. To establish a basis for making changes in Connecticut planning, zoning and related statutes, particularly changes which will strengthen the relationship of zoning to planning, provide new methods, techniques, and organizations for planning and zoning, guide and direct the broad scope of community development in accordance with present day standards and future requirements and correct inconsistencies and ambiguous provisions, including definitions, in the statutes.

Method of Study. A survey of the historical background of planning and zoning will be performed as a basis for evaluating current law and practice. A questionnaire will be administered to a selected group of municipalities, to be followed up by interviews where necessary, to determine local development policies, the effectiveness of comprehensive planning and zoning efforts, and the roles of the various boards and commissions. A special study

to determine the effect of large-lot zoning, increased subdivision standards, and restrictive practices under building codes on the development and availability of moderately-priced housing will be performed. Recommendations for legislative changes will be submitted to the Connecticut General Assembly. (LAG)

4. ELIMINATION OF NONCONFORMING SIGNS

Main Investigator: Not reported.

Status of Research and Publications: Completed. Report published April, 1966. Available only to subscribers to ASPO Planning Advisory Service.

Agency: American Society of Planning Officials.

Previous Digest Report: None.

Research Problem. To examine present development of the amortization concept as it relates to nonconforming signs.

Method of Study. A questionnaire was sent to planning agencies to determine how many jurisdictions have elimination requirements and how successful their elimination programs are. Zoning ordinance provisions relating to the involuntary elimination of nonconforming signs are described and analyzed in the study.

Major Findings. Despite the fact that the authority is available in most states to eliminate signs through amortization provisions, this procedure has met with only limited success. Although 117 of the 366 agencies returning questionnaires had elimination requirements, only 47 of the 117 actually used the requirements in a sign elimination program. Only a few of the 47 have removed more than half a dozen signs. The explanations given for this lack of enforcement are: (1) lack of staff time, and (2) lack of support from local officials. (LAG)

5. RELATIONSHIP OF CITY PLANNING TO HEALTH PLANNING

Main Investigators: Jerome Kaufman, Frank Beal, Gail Ornstein, and Ken Wheeler.

Status of Research and Publications: In process. Completion scheduled for September, 1967.

Agency: American Society of Planning Officials, under sponsorship of U.S. Public Health Service.

Previous Digest Report: None.

Research Problem. To relate city planning to health facility and service planning: (1) determine the present working relationship between city and health planners and the substance of the support city planners presently give to health planning; (2) suggest an ideal working relationship between the two disciplines; (3) prepare a series of recommendations directed primarily to city planning agencies to guide them in making a greater contribution to health planning.

Method of Study. A questionnaire will be administered to approximately 150 city planning agencies concerning their relations with health planning groups. Case studies of six different communities will also be conducted. The focus, in general, will be upon the substantive and procedural relationships between the city planning and health planning agencies, in particular upon a specific area of interaction such as urban renewal, zoning, the CRP, or a special study of a medical center complex. (LAG)

6 AIR ZONING

Main Investigator: Michael J. Meshenberg.

Status of Research and Publications: In process. Completion and publication of findings scheduled for July, 1966.

Agency: American Society of Planning Officials.

Previous Digest Report: None.

Research Problem. To bring the problem of air pollution to the attention of planners and to describe their role in its alleviation. The relatively new concept of air zoning is discussed in the context of an air resource management study, including the basis upon which standards of air quality are established. (LAG)

7 AN INDUSTRIAL SURVEY OF TECHNOLOGICAL CHANGES EXPECTED TO AFFECT THE HOUSING INDUSTRY DURING THE PERIOD 1965-1975

Main Investigator: Richard T. Lasko.

Status of Research and Publications: In process

Agency: Battelle Memorial Institute (Columbus, Ohio) under sponsorship of Department of Housing and Urban Development

Previous Digest Report: None

Research Problem. Develop and report on the expected technological changes and their probable impact upon the United States housing industry between 1965 and 1975. The major categories of technological changes to be studied are design concepts, construction methods, manufacturing processes, materials and products, and building components. (HR)

8. TRAINING AND MANPOWER REQUIREMENTS

Main Investigators: Robert J. M. O'Hare, Benjamin H. Renshaw, Richard J. Olsen, and Edward J. Lynch.

Status of Research and Publications: In process. Completion expected by July, 1966.

Agency: Boston College, College of Business Administration, Bureau of Public Affairs, under sponsorship of New England Economic Research Foundation.

Previous Digest Report: None.

Research Problem. To ascertain what state governments in the New England region (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island and Vermont) have for on-going training programs for state officials and employees, and plans for the same, together with an analysis of what is being done or projected in the area of manpower planning.

Method of Study: (1) Questionnaires to key personnel officers and a separate set of questionnaires to key department heads. (2) Personal interviews with all the aforesaid officials. (RJMO)

9. EFFECT OF HOUSING AVAILABILITY ON EMPLOYMENT OPPORTUNITIES

Main Investigator: Everett J. Burt, Jr.

Status of Research and Publications: In process.

Agency: Boston University, Department of Economics, under sponsorship of Department of Housing and Urban Development.

Previous Digest Report: None.

Research Problem. Study the impact of the relocation of large employers from Boston to Route 128 upon residential patterns and employment choices. (HR)

10. GOVERNMENT CONTROLS ON TRANSPORT: AN AFRICAN CASE

Main Investigators: Edwin T. Hefele and Eleanor B. Steinberg.

Status of Research and Publications: Published under the above title December, 1965, by The Brookings Institution, Brookings Transport Research Program, 1775 Massachusetts Avenue, N.W., Washington, D. C. 20036. 102 pages. \$3.50 cloth, \$2 paper.

Agency: The Brookings Institution, Brookings Transport Research Program.

Previous Digest Report: For related projects, see 11:1-13 and 11:2-3.

Research Problem. Determine the effect of governmental restrictions upon transport facilities in emerging nations and upon definition of transport investment needs.

Major Findings. An important factor in determining new transport investment needs in emerging nations is the degree to which existing facilities are utilized. Utilization, in turn, is affected by governmental restrictions. Where these facilities are shared by more than one nation, as they are in Africa, governmental controls on transport become subject to international politics as well as national economics. (JS)

11. DEFENSE PURCHASES AND REGIONAL GROWTH

Main Investigator: Roger E. Bolton.

Status of Research and Publications: Published under the above title March, 1966, by The Brookings Institution, 1775 Massachusetts Avenue, N. W., Washington, D. C. 20036. 189 pages. \$6. cloth, \$2.50 paper.

Agency: The Brookings Institution.

Previous Digest Report: None.

Research Problem. Develop and present a simple model of regional growth and estimate the contribution of defense income to this growth by state and region for the period 1952-1962

Major Findings. Defense income was a major factor in the growth of the Mountain and Pacific regions, contributing about a fourth of the total growth. These areas escaped the severe cutbacks in defense spending after the Korean War which had a depressing influence in almost all other regions from 1952-1956. From 1956 to 1962 defense activity increased all over the country, but not uniformly. Middle Atlantic and East North Central regions, which suffered the greatest losses in the first period, received the smallest relative defense contribution to their growth in the second. New England received large contributions in the second half which more than compensated for the decline it suffered in the first half of the period. (JS)

12. POPULATION REDISTRIBUTION IN DENMARK

Main Investigator: Sidney Goldstein

Status of Research and Publications: Completion expected summer of 1966.

Agency: Brown University, Department of Sociology.

Previous Digest Report: None.

Research Problem. Analysis of population movement in Copenhagen metropolitan area and the impact of this movement on its social and demographic structure. (GT)

13. CONSUMER BEHAVIOR OF THE AGED

Main Investigator: Sidney Goldstein.

Status of Research and Publications: In process.

Agency: Brown University, Department of Sociology.

Previous Digest Report: None.

Research Problem. Analysis of the consumer behavior of the aged in urban places, including the distribution of expenditures for housing, medical care, food, and other items. (GT)

14. METROPOLITANIZATION IN RHODE ISLAND

Main Investigators: Sidney Goldstein and Kurt B. Mayer.

Status of Research and Publications: A continuing project.

Agency: Brown University, Department of Sociology.

Previous Digest Report: None

Research Problem. Continuing evaluation of the changing socio-demographic structure of the Providence metropolitan area and the impact of migration on this structure. (GT)

15. A STUDY IN MENTAL HEALTH IN PUBLIC WELFARE

Main Investigators: Philip Lichtenberg and Jeanne C. Pollock.

Status of Research and Publications: In process.

Agency: Bryn Mawr College, under partial sponsorship of Christiana Foundation.

Previous Digest Report: None.

Research Problem. A study to discover special personality characteristics of clients of public welfare agencies and of successful case-work services rendered to them.

Method of Study. Information is collected from case records in departments of public assistance and discussions of cases with case-workers. Content analyses will be made of the information. (PL)

16. COUNTY LOCAL AGENCY FORMATION COMMISSIONS AND THEIR IMPACT ON THE URBAN PLANNING FUNCTION

Main Investigator: Not reported.

Status of Research and Publications: In process. Completion expected by January, 1967. Summary report to be available for distribution.

Agency: State of California, Intergovernmental Council on Urban Growth, with advice and cooperation of the County Supervisors Association of California and the League of California Cities.

Previous Digest Report: None.

Research Problem. To provide a current picture of LAFCO (Local Agency Formation Commission) performance and to evaluate the effect of LAFCO actions on the pattern and structure of local governments since creation of the commissions in late 1963; to assess their potential for complementing the work of related local agencies in anticipating, planning, and guiding future growth and development.

Hypothesis. Local agency formation commissions, with sole jurisdiction to review, approve and disapprove, or approve with conditions all proposals for creation or change in local agency boundaries (annexation, incorporation, consolidation, and dissolution), are a unique agency local government that have a developing role in the future of local government. Furthermore, the potentials of this agency have not been fully recognized (PGS)

17. AN ANALYSIS OF INTERREGIONAL MIGRATION IN CALIFORNIA AND PROJECTED POPULATION GROWTH IN CALIFORNIA REGIONS: 1960-1980

Main Investigator: Andrei Rogers.

Status of Research and Publications: Completed. Findings published under above title by the investigator as part of Phase II, California State Development Plan. Berkeley: Center for Planning and Development Research, University of California, December, 1965. For discussion of method used in population study, see "Matrix Methods of Population Analysis," Journal of the American Institute of Planners, Volume XXXII, No. 1, January, 1966, pp. 40-44.

Agency: University of California (Berkeley), Center for Planning and Development Research, in cooperation with California State Office of Planning.

Previous Digest Report: None.

(1) Migration study presents an analysis of two major aspects of population mobility in California: migration streams and migration differentials. Migration stream analysis focuses on the level and direction of interregional movements. The analysis of migration differentials considers principal differences between the movement characteristics of various migration sub-groups. Included is a review of current interregional migration models, and an analysis of internal state migration as an important way by which people respond to changing economic

opportunities and thereby redirect the spatial allocation of labor toward an optimal pattern. Regression analyses are used to represent the significance and relative importance of this "push-pull" hypothesis. It is concluded that comparative economic opportunity is indeed a powerful factor which significantly influences the direction and level of interregional movements in California. Results are presented in detailed tables showing interregional flows and transition matrices (1955-1960) for state economic areas by population, color, age, and sex. A sample of state drivers' license registrations is used to construct similar tables for intercounty migration from 1961 to 1963.

(2) The population report focuses on population growth in California regions. It presents three principal series of projections of the population of California, by age and State Economic Area, for 1965 to 1980, using 1960 counts as a benchmark. The results indicate the probable future regional distribution and age composition of the state's population under various assumptions with respect to inter- and intra-state migration patterns.

Utilization of matrix representation and manipulation of population change and movement in the application of the traditional cohort-survival projection method, by treating the projection process as an "operator," separates it from the population to which it is applied. This separation permits the study of the consequences of applying the same projection process itself and its long-term implications. The report presents an integrated interregional population projection model which is easily programmed for any of the current generation of digital computers. First, the effects of mortality and fertility are shown to be expressible by matrix multiplication. Migration is described in terms of transition matrices, and then, an integrated matrix model of population growth is presented in which the effects of fertility, mortality and migration are applied to an age-disaggregated population as it is adjusted forward through successive time periods. (DWL)

18.. A QUARTERLY ECONOMIC FORECASTING MODEL FOR THE STATE OF CALIFORNIA

Main Investigators: Richard P. Burton and John W. Dyckman.

Status of Research and Publications: Completed. Findings published as A Quarterly Economic Forecasting Model for the State of California, Phase II, California State Development Plan. Berkeley: Center for Planning and Development Research, University of California, December, 1965.

Agency: University of California (Berkeley), Center for Planning and Development Research, in cooperation with California State Office of Planning.

Previous Digest Report: 11: 2-6 for related research.

Research Problem. Refine the economic growth model developed in Phase I of the California State Development Plan by improving estimation reliability of certain sectors; reclassify certain industry (SIC) groupings; secure better predicting equations through improvement or augmentation of basic data.

Method of Study. Reduced multicollinearity in forecasting equations; regrouped SIC categories into more detailed defense industry breaks (seven DOD sectors); increased industry grouping from 53 to 60 groups; improved nonwage income estimating equation by disaggregating into Other Labor Income, Proprietors' Income, Property Income, and Transfer Payments.

Major Findings. Findings are presented in the form of 130 detailed estimating equations (including R^2 , Standard Error of Coefficient, Student-t test, and Durbin-Watson Statistic, plus forecast estimates for state personal income, employment, wage and salary disbursement, taxable sales, corporate income, gasoline gallonage, and unemployment. Each estimate is made quarterly from 1963 to 1975. (DWL)

19. UNEMPLOYMENT AND MINORITY GROUPS IN CALIFORNIA

Main Investigator: Clare C. Cooper.

Status of Research and Publications: Completed. Findings published by the investigator as Unemployment and Minority Groups in California, Phase II, California State Development Plan, Berkeley: Center for Planning and Development Research, University of California, December, 1965.

Agency: University of California (Berkeley), Center for Planning and Development Research, in cooperation with California State Office of Planning.

Previous Digest Report: None.

Research Problem. A study of California's unemployment problem and its possible solutions.

Method of Study. Stress is placed upon the major population groups most severely affected by unemployment in California: Mexican-Americans, Negroes, and the high school dropouts. Three categories of solution to the unemployment problem are reviewed: (1) aids to occupational mobility, (2) aids to geographical mobility, and (3) aids to the creation of jobs. Extensive recommendations are made concerning the role of state government in the alleviation of unemployment. (DWL)

20. LAND USE INFORMATION FOR CALIFORNIA GOVERNMENT: CLASSIFICATION AND INVENTORY

Main Investigator: Michael B. Teitz.

Status of Research and Publications: Completed. Findings published by the investigator in Land Use Information for California Government: Classification and Inventory, Phase II, California State Development Plan. Berkeley: Center for Planning and Development Research, University of California, 1966.

Agency: University of California (Berkeley), Center for Planning and Development Research, in cooperation with California State Office of Planning.

Previous Digest Report: None.

Research Problem. Consideration is given to general features of the theory of classification and the land use concept. Recent theoretical and practical contributions to the field of land use classification are examined. Findings about land use data collection and classification in California emphasize the Department of Water Resources. A formal analysis of the problem of land use data as a variable input to government is presented which examines the conditions under which unified agency data collection may be preferable to separate agency collection. Results in a sketch of a strategy for governmental land use data collection, inventory and utilization in California. Four major technical problems involved in inter-agency data compatibility are discussed: (1) application of electronic data processing methods to land use information; (2) locational identification of data; (3) fundamental units for observation and recording of information; (4) statistical methods in the provision and analysis of land use information. Findings and recommendations are made with respect to: land use theory, land use classification systems, organization for land use data and information, and land use data specification and quality. (DWL)

21. PLANNING OF COMMUNITY FACILITIES

Main Investigators: Nathan Glazer, John Dyckman, Martin Meyerson, and Allan Blackman.

Status of Research and Publications: In process. Completion expected fall of 1966. Findings to be published as a book.

Agency: University of California (Berkeley), Center for Planning and Development Research, in cooperation with U.S. Public Health Service.

Previous Digest Report: None.

Research Problem. Analyze the planning of education, health, and recreation facilities in the United States. There will be a critique of the use of national standards as a planning device and an exploration of alternative planning approaches, especially resource allocation by local decision makers using local goals and resources. (DWL)

22. RESOURCE MATERIALS ON HEALTH AND SOCIAL WELL-BEING IN THE ENVIRONMENT OF THE METROPOLITAN REGIONS

Main Investigators: John Dyckman, Allan Blackman, Francis Ventre, and Consultants.

Status of Research and Publications: Completion expected June, 1966. Findings to be presented at the 50th Anniversary Program of the American Institute of Planners (Seattle), August, 1966.

Agency: University of California (Berkeley), Center for Planning and Development Research, in cooperation with U.S. Public Health Service.

Previous Digest Report: None.

Research Problem. Determine what knowledge and techniques have been developed by the behavioral sciences which would be of interest and benefit to planners. (DWL)

23. A PATTERN OF COMMUNITY MENTAL HEALTH SERVICES, DEVELOPMENT PLAN FOR MENTAL HEALTH IN THE SAN GABRIEL VALLEY, LOS ANGELES METROPOLITAN AREA, 1965-1975.

Main Investigators: F. Guillermo Lehmann and John W. Dyckman.

Status of Research and Publications: Completed. Findings published by the investigators under the above title, October, 1965.

Agency: University of California (Berkeley), Center for Planning and Development Research, in cooperation with Los Angeles County Department of Mental Health, under sponsorship of the California State Department of Mental Hygiene.

Previous Digest Report: None.

Research Problem. (1) To develop a methodology by which urban and other resource planning techniques and experience can be applied to certain aspects of mental health planning. A community which appeared to lend itself to this end was used as a laboratory.

(2) An economic and demographic analysis for a specific region to provide a basis for locational decisions. Given present and anticipated mental health resources, where for example, should outpatient services be located? Where might inpatient beds be located? To what degree might these be public and to what degree private? To a great extent, projections made were the kinds undertaken when determining sites for major public facilities, shopping centers, educational institutions, and other community facilities. (DWL)

24. THE MEASUREMENT OF NON-USER BENEFITS IN STATE HIGHWAY CONSTRUCTION

Main Investigator: Phoebe Cottingham.

Status of Research and Publications: In process. Completion expected October, 1966.

Agency: University of California (Berkeley), Center for Planning and Development Research, in cooperation with California Division of Highways.

Previous Digest Report: None.

Research Problem. Analyze certain kinds of non-user benefits in highway location decisions.

Method of Study. Analysis of past cases of highway route locations involving particular kinds of non-user effects. (DWL)

25. TECHNOLOGY AND URBAN MANAGEMENT

Main Investigators: C. West Churchman and Melvin M. Webber.

Status of Research and Publications: In process. Completion of Phase I expected December, 1966.

Agency: University of California (Berkeley), Center for Planning and Development Research, and Space Sciences Laboratory.

Previous Digest Report: None.

Research Problem. Apply the intellectual and managerial technologies of the systematic planning-and-decision processes to city government.

Method of Study. (1) "Match" operational characteristics of technology devices with those of social and physical systems; (2) make a practical application of this plan in Oakland, California. (GT)

26. THE EFFECTIVENESS OF PLANNED SUB-CENTERS IN MEETING GROWTH PROBLEMS OF ITALIAN CITIES

Main Investigator: Corwin R. Mocine.

Status of Research and Publications: Completed. Paper published in Journal of the American Institute of Planners, XXXI: 3, August, 1965, pp. 210-221.

Agency: University of California, (Berkeley), Department of City and Regional Planning.

Previous Digest Report: None.

Research Problem. Italian cities are growing very fast both in population and in business activity. The historic city center is not physically able to absorb this growth and the planning of new centers is going forward in nearly every important Italian city. The purpose of this project was to study the proposed new centers in terms of their planning objectives, their design quality, and effectuation processes.

Method of Study. Reading Italian technical literature, interviews with leading Italian city planners and architects and visits to cities in which new centers were proposed to be built.

Major Findings. Although only one center was fully operational and one other under construction, there was sufficient planning to permit some preliminary conclusions to be drawn. A principal problem is the possible effect of such new centers on the old core. The locational and other advantages of the new centers may make them so attractive and efficient that the old centers may be vacated. Italian planners feel that the traditional preference of Italian people for city life and the high prestige of central city locations will prevent any such mass decentralization. The design of the new centers is a matter of wide concern, particularly because the Italian city planners are all trained as architects. Several handsome projects have been proposed. A weakness seems to be in the methods relied upon to carry out such plans. Italian planning effectuation "tools" need to be strengthened and improved. (CRM)

27. EARTHQUAKE HAZARD: A PUBLIC POLICY PROBLEM IN THE SAN FRANCISCO BAY AREA

Main Investigator: Karl Steinbrugge.

Status of Research and Publications: In process.

Agency: University of California (Berkeley), Institute of Governmental Studies.

Previous Digest Report: None.

Research Problem. A study covering the inevitability of future earthquakes, earthquake history in the Bay area, and the significance to the public of the Bay area faults. The civil and structural engineering problems and the geological problems will be discussed; also such special problems as seismic sea waves and earthquake prediction. The governmental role and public policy will include relationships between federal, state, regional and local agencies involved and will stress the great need for a planning agency to coordinate public action. (BJH)

28. WATER SUPPLY FLUORIDATION AS A PUBLIC POLICY ISSUE

Main Investigator: Stanley Scott.

Status of Research and Publications: In process.

Agency: University of California (Berkeley), Institute of Governmental Studies.

Previous Digest Report: None.

Research Problem. The pros and cons of fluoridating community water supplies are being reviewed. The results of an opinion survey and of local referenda are being analyzed to determine the influence, if any, of factors such as age, socio-economic status and educational attainment on voting and attitude patterns. An attempt is being made to find comparative data from other localities both within and outside the United States. (BJH)

29. PROPERTY TAX EXEMPTIONS FOR SENIOR CITIZENS

Main Investigator: Margaret Greenfield.

Status of Research and Publications: In process.

Agency: University of California (Berkeley), Institute of Governmental Studies.

Previous Digest Report: None.

Research Problem. To study the problem of property taxation as it affects low-income households, particularly those headed by persons 65 years of age or over, and to evaluate the different proposals for change.

The burden of the property tax on lower-income households is sufficiently heavy to warrant considering some form of relief. It has become increasingly evident that the property tax can no longer bear as large a share of the total tax burden as in the past. In the absence of thoroughgoing reforms in the entire structure of local taxation, pressures will undoubtedly increase for concessions to aged home owners. Both tax exemptions and tax credits are basically subsidy programs and should be examined in that light.

Method of Study. Analysis of Census data on household income and of available data on the property tax, plus a survey of type and cost of current tax exemptions for the aged by means of a mail questionnaire to the 50 state governments. (MG)

30. LARGE NEW COMMUNITIES AND PUBLIC POLICY

Main Investigator: Stanley Scott.

Status of Research and Publications: Published in part in Public Affairs Report, Vol. 6, Nos. 3, 5 and 6. Further work in process. After further investigation articles already published will be revised and published as a monograph, along with community case studies.

Agency: University of California (Berkeley), Institute of Governmental Studies.

Previous Digest Report: None.

Research Problem. A new variety of urbanization has appeared on the American scene, especially in California: the planning and building of large new communities by one developer or by a group of closely associated owners. This study is based on field work in nine such communities in California, and oriented toward the significance of this type of development in relation to local government. It discusses the need for an interim government and various proposals for a permanent governmental organization for the benefit of the community itself, the region and the state. (BJH)

31. ANALYZING METROPOLITAN ECONOMIC DEVELOPMENT IN THE SAN FRANCISCO BAY AREA: A REVIEW OF REGIONAL DEVELOPMENT MODELS

Main Investigator: William Goldner.

Status of Research and Publications: In process.

Agency: University of California (Berkeley), Institute of Governmental Studies.

Previous Digest Report: None.

Research Problem. To describe and evaluate the changing methodology of economic development studies of the San Francisco Bay Area.

Method of Study. Each study will be reviewed for the problems which it has studied, the methodology used and the conclusions reached. The monograph will incorporate suggestions and inferences with regard to content and methodological standards for region-wide economic development studies in the San Francisco Bay region. (WG)

32. GOVERNMENT AND CIVIC DESIGN: AN ARCHITECTURAL VIEW

Main Investigator: Garrett Eckbo.

Status of Research and Publications: In process.

Agency: University of California (Berkeley), Institute of Governmental Studies.

Previous Digest Report: None.

Research Problem. A review of recent developments in civic and institutional design, including governmental complexes and civic centers, urban redevelopment and renewal projects, and college and university campuses.

Method of Study. Make a visual survey of a representative cross-section of such development, either in the San Francisco Bay area or perhaps expanding to Southern California. On the basis of such a survey the report will endeavor to develop a constructive critique of current land and site planning, architectural and landscape architectural attitudes, theories, practices, processes and results. (GE)

33. THE SPATIAL DISTRIBUTION OF LOCAL PUBLIC SERVICES

Main Investigator: Charles Benson.

Status of Research and Publications: In process.

Agency: University of California (Berkeley), Institute of Governmental Studies.

Previous Digest Report: None.

Research Problem. To investigate the distribution of local services among the "neighborhoods" of large municipalities in order to test the actual distribution of services against stated or assumed criteria of distribution and to provide an empirical base for further investigation of the interdependence of participation in different types of services in neighborhoods strongly distinguished by socio-economic characteristics.

Method of Study. Local services are divided into six categories: education, protection, health and welfare, libraries, recreation and inspection. "Neighborhoods" are small numbers of continuous census tracts, grouped according to homogeneity of socio-economic variables (household income, education of adults, occupation) and according to land use. The areas under investigation are in Berkeley. (CB)

34. URBAN FORM AND THE LIVING LANDSCAPE

Main Investigator: Frances W. Herring.

Status of Research and Publications: In process.

Agency: University of California (Berkeley) Institute of Governmental Studies.

Previous Digest Report: None.

Research Problem. Rounding out the legal approach of Open Space and the Law, this complementary volume advances criteria judged basic to wise decision-making on the treatment of land in an urban civilization. Ecological considerations are stressed. It is argued that traditional economic concepts have limited usefulness to the social values to be conserved in planning urban use of land. Certain practical suggestions are then developed; which types of land and water are essential to preserving the living landscape in urban areas; how to make the most of the interaction of governmental and entrepreneurial decisions in our private enterprise economy; and the prominent roles which private persons and non-profit agencies must continue to play if the American landscape is to be kept alive. (BJH)

35. ECONOMIC PROBLEMS OF AGED HOMEOWNERS IN TWO CENSUS TRACTS IN OAKLAND

Main Investigator: Margaret Greenfield.

Status of Research and Publications: Completed and published, 1965.

Agency: University of California (Berkeley), Institute of Governmental Studies and School of Social Welfare.

Previous Digest Report: 12: 1-22.

Research Problem. For a selected group of elderly home-owners in one city, annual income and expenditures were examined and estimates made of property tax impact. Interviews with a sample of 120 aged home-owners were conducted as a group research project by graduate students in the School of Social Welfare. (BJH)

36. PARTISANSHIP, POWER AND BLOC VOTING ON BAY AREA CITY COUNCILS

Main Investigator: Thomas W. Casstevens .

Status of Research and Publications: In process. Summary study will be published as a forthcoming issue of Public Affairs Report.

Agency: University of California (Berkeley), Institute of Governmental Studies.

Previous Digest Report: 12: 1-24.

Research Problem. An analysis of degree of de facto partisanship in legally nonpartisan municipal politics in a sample of San Francisco Bay area cities. Roll call votes in 1953 and 1963 are being analyzed for San Francisco, Richmond, Berkeley and Oakland in terms of party bloc voting, power of individual councilmen, and "natural" bloc voting. (BJH)

37. POLITICS, HOUSING AND RACE RELATIONS: CALIFORNIA'S RUMFORD ACT AND PROPOSITION 14

Main Investigator: Thomas W. Casstevens

Status of Research and Publications: In process. This is second part of Politics, Housing and Race Relations, published in November, 1965.

Agency: University of California (Berkeley), Institute of Governmental Studies.

Previous Digest Report: 12: 1-23.

Research Problem. In 1964 there was a vigorous campaign in California over an initiative constitutional amendment, Proposition 14, that was designed to void the state's fair housing law, the Rumford Act, that had been passed in 1963. This study is an analysis of the genesis, culmination and consequences of the battle over fair housing legislation in California. (BJH)

38. MAYORS' CONFERENCES IN THE BAY AREA: THEIR ORIGIN AND FUNCTIONS

Main Investigator: Donald W. Koepp.

Status of Research and Publications: In process. A summary of the historical data will be published in the forthcoming issue of Public Affairs Report. A new series of interviews is now being conducted to update material previously gathered.

Agency: University of California (Berkeley), Institute of Governmental Studies.

Previous Digest Report: 12: 1-20. (BJH)

39. ✓ OPEN SPACE AND THE LAW

Main Investigators: Roger W. Findley, Frances W. Herring, I. Michael Heyman, Franklin C. Latcham, Harold E. Rogers, Jr., and E. Stanley Weissburg.

Status of Research and Publications: Published end of 1965, Frances W. Herring, editor.

Agency: University of California (Berkeley), Institute of Governmental Studies.

Previous Digest Report: 12: 1-21.

Research Problem. A study to help citizens and elected officials take advantage of the legal powers and tools they now possess for preserving open space in metropolitan America. (BJH)

40. PLANNING IN MAJOR METROPOLITAN AREAS

Main Investigators: Stanley Scott and others .

Status of Research and Publications: In process .

Agency: University of California (Berkeley), Institute of Governmental Studies.

Previous Digest Report: 12: 1-25 .

Research Problem. A series of monographs on the political, social, and economic aspects of urban growth in the metropolitan regions under study.

Additional authors designated since last Digest report are: Minneapolis-St. Paul region - Daniel Elazar, Temple University; New York region - Jameson Doig, Princeton University; Cologne-Dusseldorf region - Fritz Morstein Marx; San Juan, Puerto Rico region - Robert Anderson, University of Puerto Rico; an Israeli study (tentative) - Daniel Elazar, Temple University.

Method of Study. Upon completion of the individual monographs, we hope to prepare several comparative papers, based in part on the monographs. (BJH)

41. PUBLIC MENTAL HEALTH IN THE SAN FRANCISCO BAY AREA

Main Investigator: Portia Bell Hume.

Status of Research and Publications: In process.

Agency: University of California (Berkeley), Institute of Governmental Studies.

Previous Digest Report: None.

Research Problem. A study of patterns of community mental health services, both clinical and preventive, in nine counties touching upon San Francisco Bay.

Method of Study. Review and analysis of available biostatistical data of the population, mental health resources, and major gaps in mental health services. Central questions and issues developed through a consideration of the area as a matrix generating both problems and attempts at solutions.

Major Findings. The major issues emerging from the study are viewed either as idiosyncratic to the San Francisco Bay Area or as examples of issues encountered in any community's attempt to reduce psychiatric disorders to a minimum. The issues include (1) the nature of researchable questions related to administrative fact-finding; (2) the consequences to indigenous planning of enabling legislation for mental health programs and facilities; (3) the uses and abuses of scarce psychiatric and parapsychiatric manpower; (4) the relationship between resistances to mental health programs and different styles of mental health administration; and (5) the importance to future opportunities of the remembrance of things past, in the administrative process of planned change within local mental health services. (PBH)

42. PARTICIPATION OF THE POOR IN COMMUNITY ANTI-POVERTY PROGRAMS

Main Investigator: Ralph M. Kramer.

Status of Research and Publications: In process.

Agency: University of California (Berkeley), Institute of Governmental Studies and School of Social Welfare.

Previous Digest Report: None.

Research Problem. The processes whereby the poor are involved in planning, policy-making and implementation of community anti-poverty programs will be investigated by means of four comparative case studies in the San Francisco Bay area. While sharing somewhat similar purposes, structures, functions, and composition, the four Community Action Programs differ in their sponsorship, operating systems, programs, and community context. They include two cities, one county, and a regional complex in a county, and their Community Action Programs are at varying stages of development.

Method of Study. Data will be collected from observation, analysis of records, and interviews with professional staff and key members of both governing and advisory bodies on the community-wide and neighborhood level. Attention will be focused on: (1) the criteria and methods used to secure representatives of the target areas to serve on the Economic Opportunity Councils and in neighborhood organizations; (2) the nature of their participation, including the differential perception of their roles and extent of influence. (RMK)

43. CALIFORNIA AIRPORT SYSTEM STUDY

Main Investigators: Harmer Davis, Robert Horonjeff, and W. Gillfillan.

Status of Research and Publications: Completed.

Agency: University of California (Berkeley), Institute of Transportation and Traffic Engineering, in cooperation with State of California Senate Rules Committee.

Previous Digest Report: None.

Research Problem. Compilation of detailed information about California public-use airports pertinent to the evaluation of their adequacy or shortcomings with respect to future needs.

Method of Study. Information obtained through a questionnaire sent to owners of public-use airports, through interviews with personnel at those airports having control towers, from data obtained in an earlier study, and from various public agencies. (WSH)

44. MATHEMATICAL ANALYSIS OF TRANSPORTATION PHENOMENA

Main Investigator: Frank A. Haight.

Status of Research and Publications: In process.

Agency: University of California (Berkeley), Institute of Transportation and Traffic Engineering.

Previous Digest Report: None.

Research Problem. To isolate those aspects of transportation, including accident and safety, which are suitable for mathematical analysis; to translate the practical problems into the abstract language of symbols; to solve, if possible, the resulting mathematical problems. These can then be re-interpreted in terms of original formulation. (WSH)

45. THE INTERFACE BETWEEN TRANSPORTATION AND LAND-USE PLANNING

Main Investigator: Robert Brenner.

Status of Research and Publications: In process. A preliminary analysis completed of warrants for grade separation of arterial intersections and for pedestrian overcrossings.

Agency: University of California (Berkeley), Institute of Transportation and Traffic Engineering, in cooperation with City of Los Angeles.

Previous Digest Report: None.

Research Problem. Analysis of the interactions between transportation and land-use planning in urban regions. A further objective is to develop performance standards on transportation criteria for land-use planning and zoning. Studies are in progress to explore how transportation criteria can be incorporated more systemically in the newly evolving techniques of performance standards planning. Present general planning practice applies fixed standards to all developments proposed for a given land parcel. In contrast, the performance standards approach centers on interactions between a planning development and its environs. (WSH)

46. OBJECTIVES AND METHODOLOGY IN LONG-RANGE TRANSPORTATION PLANNING

Main Investigator: Richard R. Carll.

Status of Research and Publications: In process.

Agency: University of California (Berkeley), Institute of Transportation and Traffic Engineering, in cooperation with Bay Area Transportation Study Commission.

Previous Digest Report: None.

Research Problem. This project is being conducted as a contribution to certain design aspects of the Bay Area Transportation Study. The work includes analysis of the objectives and policies of other like studies; the collection and analysis of Bay Area data concerning transport agency administration, objectives, resources, etc.; and contributions to design of the study model. (WSH)

47. AIRPORT ECONOMICS

Main Investigator: Paul K. Dygert.

Status of Research and Publications: In process.

Agency: University of California (Berkeley), Institute of Transportation and Traffic Engineering.

Previous Digest Report: None.

Research Problem. To develop theoretical extensions of normative public enterprise analysis through the utilization of organizational and group behavioral models. The first goal is to develop the need for such a model and to clarify its theoretical foundation in economics and group psychology. The next step is to develop and test the model against the record of an actual decision process. (WSH)

48. EVALUATION OF SHORT-HAUL TRANSPORTATION METHODS

Main Investigator: Wolfgang S. Homburger.

Status of Research and Publications: In process.

Agency: University of California (Berkeley), Institute of Transportation and Traffic Engineering.

Previous Digest Report: None.

Research Problem. Evaluation of systems for transporting persons relatively short distances (up to about 1 or 1½ miles) in business districts, university campuses, shopping centers, etc. (WSH)

49. EFFECTS OF NEW URBAN FACILITIES ON TRAFFIC

Main Investigators: Wolfgang S. Homburger and R. R. Carll.

Status of Research and Publications: In process. Regularly scheduled traffic counts and analyses at three selected locations were continued during the year.

Agency: University of California (Berkeley), Institute of Transportation and Traffic Engineering.

Previous Digest Report: None.

Research Problem. Determine the effects of new transportation capacity on peak-period volume patterns at bottleneck locations. (WSH)

50. AESTHETIC ASPECTS OF HIGHWAY DESIGN

Main Investigator: Wayne H. Snowden.

Status of Research and Publications: In process. Exploratory work initiated during the year, mainly with a view to project definition. A literature search and collection of visual aids begun. Collaborative work with the Department of Landscape Architecture included assistance in a pilot study of landscape impact on drivers.

Agency: University of California (Berkeley), Institute of Transportation and Traffic Engineering.

Previous Digest Report: None.

Research Problem: Problems posed by including aesthetic aspects in engineering planning and design, a set of objectives that have acquired new importance through policy and law. A characteristic of the set is that benefits are not costable and not precisely measurable. "Aesthetic" refers to a deliberately excellent result of planning and design as evidenced by function and by appearance and other effects within the total environment. (WSH)

51. URBAN TRANSPORTATION CHARACTERISTICS

Main Investigator: Wolfgang S. Homburger.

Status of Research and Publications: In process. Studies dealing with traffic estimation, trip generation, distribution and assignment procedures, theories, models, and related computer programs were initiated during the year. New developments were presented in a special two-day presentation for personnel of the California and Nevada highway departments.

Agency: University of California (Berkeley), Institute of Transportation and Traffic Engineering.

Previous Digest Report: None.

Research Problem. Techniques for evaluation of general urban transportation characteristics. (WSH)

52. MACROSCOPIC TRAFFIC FLOW THEORY

Main Investigators: Robert Brenner and W. W. Mosher, Jr.

Status of Research and Publications: In process. During the year a new technique was developed for accomplishing the stated assignments and performed evaluations. This method explored the heretofore neglected effect of network link capacity on overall network performance.

Agency: University of California (Berkeley), Institute of Transportation and Traffic Engineering.

Previous Digest Report: None.

Research Problem. Development of macroscopic traffic flow theory. The term "macroscopic" is used to describe traffic flow theory dealing with the movements of large volumes of vehicles as groups over networks of surface arterials and freeways. This needed body of theory, in contrast with the conventional traffic flow theory that deals mainly with vehicle-to-vehicle effects, is directed toward the interface between transportation and urban planning in comprehensive master planning. The assignments of projected traffic to transport networks and the evaluation of how well these networks function under the resulting traffic loadings is essential in determining the nature and capacity of proposed transport systems. (WSH)

53. MEXICAN-AMERICAN STUDY PROJECT

Main Investigators: Leo Grebler, Joan Moore and Ralph Guzman.

Status of Research and Publications: In process. Begun in 1964; completion scheduled for late 1967. Completed research to be published as a book. Findings to date published as Advance Reports: Walter Fogel, Education and Income of Mexican-Americans in the Southwest, Advance Report 1, November, 1965; Leo Grebler, Mexican Immigration to the United States: The Record and Its Implications, Advance Report 2, January, 1966; The Staff, Bibliography, Advance Report 3, February, 1966.

Agency: University of California (Los Angeles), Graduate School of Business Administration, Division of Research, under sponsorship of the Ford Foundation.

Previous Digest Report: None.

Research Problem. To analyze the socio-economic conditions of the second largest disadvantaged minority in the United States, the Mexican-American population in the Southwest. Southwest is defined to include Arizona, California, Colorado, New Mexico and Texas. (LG)

54. BALTIMORE URBAN PARISH STUDY

Main Investigators: Robert G. Howes, William J. Lee and Edward W. Wood, Jr.

Status of Research and Publications: In process. Completion expected September, 1966.

Agency: The Catholic University of America, Department of City and Regional Planning, under sponsorship of the R.C. Archdiocese of Baltimore.

Previous Digest Report: None.

Research Problem. A professional study of and plan for the physical facilities of the Roman Catholic Church in the City of Baltimore, considering the changed urban pattern in the city. Decisions on the disposition or rehabilitation of parish plant are closely related to responses to the Vatican Council on such immediate issues as changing neighborhoods, anti-poverty programs, pastor-curate-laity relationships and educational services. The concern is with what can be done to make the services of the urban parish more effective, both now and in the future.

Hypotheses. That the Church in the city today requires the best secular knowledge about property, organization, personnel training and placement, coherence of agencies, etc. That the application of such knowledge will enhance and enlarge the spiritual mission of religion. That form follows function and that the new form of the Church in central Baltimore must be developed out of a close awareness of the new function of a post-Vatican II Church in the modern world.

Method of Study. Fact finding and analysis of the existing civic and church situation in central Baltimore; proposition of alternatives to Cardinal Shehan, the decision maker; an initial selection among those alternatives by the Cardinal; precision of final plans in graphic and report form.

The study area contains 51 parishes, 41 parochial grammar schools, 6 parochial business schools, 11 high schools. It covers 71.5% of the total population of Baltimore (97.6% of Baltimore's non-white inhabitants). (RGH)

55. QUALITY DESEGREGATED EDUCATION IN BRIDGEPORT, CONNECTICUT

Main Investigator: Richard R. Boardman.

Status of Research and Publications: In process. Completion expected by July, 1966.

Agency: Center for Urban Education, (New York, N. Y.), in cooperation with Bridgeport Board of Education, (Bridgeport, Connecticut).

Previous Digest Report: None .

Research Problem. Planning and research services to assist the Board of Education in Bridgeport, Connecticut in developing a plan for quality desegregated education in its public schools.

Method of Study. Research will be conducted in four stages:
(1) Collection of basic data from which to formulate a plan for quality desegregated education. (2) Assistance to the Board in preparing its plan and completing initial assessments of the public school organization. (3) Assistance to the Board in implementing its plan. (4) Periodic evaluations of the ongoing plan, and periodic consultations with the Board to assist in the continuing operation of the plan. (RRB)

56. SELF-HELP PARENT EDUCATION IN DEPRESSED URBAN AREAS

Main Investigators: Irwin Goldberg and Joe L. Rempson.

Status of Research and Publications: In process. Completion expected September, 1967.

Agency: Center for Urban Education (New York, N. Y.), in cooperation with United Parents Association and New York City Board of Education.

Previous Digest Report: None.

Research Problem. An evaluation of the United Parents Associations Self-Help Parent Education Program in selected New York City depressed areas. The purposes are to document the drawing power of the program, discover selected sociological characteristics of the participating and non-participating parents, and determine the effects of the program on pupils in regard to their school achievements, school attendance, self-image, family relations, and school relations; on parents concerning their contacts with the school, attitude toward the school, participation in community organizations and activities, aspirations for their children, self-confidence and home environment for their children; and on teachers and principals with reference to their home-relations philosophy and practices and their perceptions of pupils and parents.

Method of Study. A "before" and "after" design using control schools, including a case study of two experimental schools will be employed. There will be a follow-up study the second year. Data on a representative sample of pupils will be secured through school records, self-report inventory and teacher reports. Facts on a representative sample of parents will be obtained through questionnaires, interviews, attendance records and observations in the case study schools. A representative sample of the teachers and all of the principals will be administered questionnaires. In addition, the principals and key UPA personnel will be interviewed. Multiple regression and other appropriate statistical procedures will be used to help analyze the data. (JLR)

57. BUFFALO SCHOOL AND COMMUNITY STUDY

Main Investigators: Gladys Lang and Arthur Brodbeck.

Status of Research and Publications: In process. Completion of first phase expected June, 1966.

Agency: Center for Urban Education (New York, N.Y.), Community Research Division, in cooperation with Buffalo School System, under sponsorship of the State Educational Department.

Previous Digest Report: None.

Research Problem. A study of the public schools of Buffalo, New York, to assist the State Education Department of New York develop a program for quality desegregated education in Buffalo.

Method of Study. The initial phase will focus on devising a satisfactory program for adequate education of children in a racially desegregated school system and utilizing data obtained in analysis of demographic, community interest and educational structure data. A longer term evaluation will also be carried out aimed at providing continuing assistance to the state as it implements its plan in the Buffalo public schools. (FLM)

58. THE POLITICS OF URBAN PLANNING

Main Investigator:: C. Richard Hatch.

Status of Research and Publications: In process. Completion expected January, 1967.

Agency: Center for Urban Education (New York, N. Y.) and Architects' Renewal Committee in Harlem, in cooperation with Board of Education of the City of New York.

Previous Digest Report: None.

Research Problem. To encourage the participation of residents in their local community development by teaching the Politics of Urban Planning to seventh and eighth grade students.

Method of Study. From September 1965 through December 1965, ARCH conducted a demonstration course on the Politics of Urban Planning in two seventh grade classes at Wadleigh Junior High School in Harlem. In the fall of 1966, eighth grade classes using the new social studies curriculum in each of two schools in four areas of the city, Harlem, and the Lower East Side in Manhattan, Morisania in the Bronx and a transitional area in Queens, will be involved.

Closely allied to the experimental social studies curriculum, some of the material would be incorporated into that program on a week to week basis, culminating in a four to six week intensive unit on the Poli-

tics of Urban Planning to be taught by the regular teachers with the aid of materials developed by the ARCH/CUE team and the services of professional planning specialists. The exact details of implementation are to be worked out in cooperation with participating schools under the guidance of a curriculum development specialist. (FLM)

59. URBAN RENEWAL IN CHICAGO: AN ANNOTATED STATISTICAL SUMMARY

Main Investigator: Jack Meltzer.

Status of Research and Publications: Completed. Published under the title "Selected Aspects of Urban Renewal in Chicago," by Center for Urban Studies, August, 1965.

Agency: University of Chicago, Center for Urban Studies, under sponsorship of Metropolitan Housing and Planning Council of Chicago.

Previous Digest Report: None.

Research Problem. Nature and degree of neighborhood deterioration which qualifies communities for assistance under joint federal-local auspices; quantitative changes in land use, movement of people and businesses dislocated, and upgrading of standards of housing under urban renewal; and monetary effects of the urban renewal program. (LSB)

60. URBAN STUDIES CURRICULUM

Main Investigators: Jack Meltzer and Brian J. L. Berry.

Status of Research and Publications: Initial study completed. Further research in process.

Agency: University of Chicago, Center for Urban Studies, under sponsorship of the Carnegie Foundation and Chicago Community Trust.

Previous Digest Report: None.

Research Problem. An initial background study on the need for and possible construction of an integrated urban curriculum at the University of Chicago. This investigation forms the basis for continued research which will result in the development and application of a curriculum designed to train people for professional practice in the urban field. (LSB)

61. CENTRAL CHICAGO ECONOMIC DEVELOPMENT STUDY

Main Investigators: Harold M. Mayer and Jack Meltzer.

Status of Research and Publications: Completed. To be published in 1966 by Mayor's Committee for Economic and Cultural Development.

Agency: University of Chicago, Center for Urban Studies, under sponsorship of Economic Redevelopment Administration, U.S. Department of Commerce, and Mayor's Committee for Economic and Cultural Development.

Previous Digest Report: .None.

Research Problem. A study designed to provide the basis for action proposals for industrial redevelopment suited to the unique physical environment and indigenous population of the central city area of Chicago. The report indicates lines of policy and action for public and private organizations to: (1) develop and redevelop the older industrial areas within the study area; (2) encourage types of development that will maximize employment opportunities for the unemployed and underemployed labor force; (3) put back into productive use those land areas and buildings now vacant or underutilized. (LSB)

62. FEDERAL AID PROGRAMS TO URBAN AREAS

Main Investigator: Jack Meltzer.

Status of Research and Publications: In process. To be completed in 1966 and published by Urban America, Inc.

Agency: University of Chicago, Center for Urban Studies, under sponsorship of Urban America, Inc.

Previous Digest Report: None.

Research Problem. A brief report defining and describing the legislative and administrative tools available to local communities through programs of the federal government that affect the physical environment. (LSB)

63. PHYSICAL FACILITIES FOR GROUP CARE OF CHILDREN

Main Investigators: Shirley A. Star, Donnell M. Pappenfort, and Sister Mary Emmanuel.

Status of Research and Publications: In process.

Agency: University of Chicago, Center for Urban Studies, under sponsorship of U.S. Department of Health, Education, and Welfare, Children's Bureau.

Previous Digest Report: None.

Research Problem. A national study of physical facilities housing children's institutions to: determine characteristics of existing plant; relate these facts to emerging functions of children's institutions and to kinds of new program demands on facilities that result; and estimate both the extent to which institutional child care programs would

substantially benefit from change, remodeling or rebuilding of physical settings, and the scope, cost, financing and other problems of such rehabilitation programs. The study will, thus, provide an estimate of the size of the national task in providing adequate child care in the institutional sector.

Method of Study. (1) Survey each state to determine provisions for, and standards and practices in licensing of children's institutions and the number and kinds of residential institutions for children currently operating. (2) Survey children's institutions to determine kinds of children in care; staff, goals and programs of institutions; physical facilities available; role of physical plant in implementing current and desired programs; and kinds of changes in facilities needed for optimal functioning. (3) Field surveys to provide expert appraisals of the feasibility of the kinds of changes in physical plant thought desirable, possible solutions to technical problems in zoning and construction, probable costs, and means of financing. (SAS)

64. SMALL BUSINESS RELOCATION AND DEVELOPMENT STUDY

Main Investigator: Brian J. L. Berry.

Status of Research: In process. To be published in the Research Series of the Department of Geography, University of Chicago, 1967.

Agency: University of Chicago, Center for Urban Studies, under sponsorship of U.S. Department of Housing and Urban Development and City of Chicago, Department of Urban Renewal.

Previous Digest Report: None.

Research Problem. A study of the problems of small merchant relocation and development in the Hyde Park neighborhood, the City of Chicago, and the nation, to: (1) Answer a series of questions concerning both the direct and indirect impact of urban renewal on small businesses, including whether mortality rates among small business establishments are significantly greater in renewal neighborhoods than "normal" for various types of business; and whether current administrative procedures regarding relocation have any effect upon success or failure of displaced businesses. (2) Codify the types of relocation possibilities that exist, and spell out relevant relocation techniques. (LSB)

65. SYSTEMS OF SOCIAL ANALYSIS

Main Investigators: R. Joyce Whitley and Jack Meltzer.

Status of Research and Publications: In process. Completion expected summer of 1966, to be submitted in the form of a report to sponsor.

Agency: University of Chicago, Center for Urban Studies, under sponsorship of Chicago Community Renewal Program.

Previous Digest Report: None.

Research Problem. To devise a system of social analysis for use in the urban renewal and planning program. (LSB)

66. ANTI-POVERTY PROGRAMS INVOLVING INCOME-IN-KIND

Main Investigator: Eugene Smolensky.

Status of Research and Publications: In process. Completion expected January, 1967.

Agency: University of Chicago, Center for Urban Studies, under sponsorship of U.S. Office of Economic Opportunity.

Previous Digest Report: None.

Research Problem. Whether direct cash subsidies to the poor would achieve the social objectives of programs now providing housing directly to the poor. (LSB)

67. STANDARD METROPOLITAN AREA CLASSIFICATION

Main Investigator: Brian J. L. Berry.

Status of Research and Publications: In process. Preliminary results to be submitted June, 1966. Final results at the end of 1966.

Agency: University of Chicago, Center for Urban Studies, under sponsorship of Social Science Research Council and U.S. Bureau of the Census.

Previous Digest Report: None.

Research Problem. An examination of existing principles of area classification for Standard Metropolitan Statistical Areas (SMSA's) and an examination of alternative criteria such as the concept of Functional Economic Areas (FEA's), in order to formulate new principles of area classification which will provide area designations which are most useful and meaningful. Also, to examine the effect of applying alternative criteria of integration of central cities and their outlying areas in the delineation of SMSA's and their relationships to other area classification systems. (BJLB)

68. CHICAGO: GROWTH OF A METROPOLIS

Main Investigators: Harold M. Mayer, Richard C. Wade, and Glen E. Holt.

Status of Research and Publications: In process. Completion expected in late spring of 1966; to be published by the University of Chicago Press in early 1967.

Agency: University of Chicago, Center for Urban Studies.

Previous Digest Report: None.

Research Problem. A pictorial history reconstructing the physical shape of Chicago at different phases of its growth. The volume also suggests how the city expanded and why it looks the way it does. A series of maps shows the size and shape of Chicago at various periods, and also serves as a guide to the book's nearly one thousand illustrations. (LSB)

69.. INLAND WATERWAY SITES FOR URBAN INDUSTRIES: A CHICAGO CASE STUDY

Main Investigator: David M. Solzman.

Status of Research and Publications: Completed and submitted as doctoral dissertation. To be published in Research Series of Department of Geography, 1966.

Agency: University of Chicago, Center for Urban Studies, under sponsorship of Mayor's Committee for Economic and Cultural Development.

Previous Digest Report: None.

Research Problem. To examine effects of an inland waterway on industrial location and stability in the city of Chicago.

Major Findings. Findings, based on questionnaire returns, indicate a decline in the number of direct waterway users in the face of increasing competition from other forms of transportation. The waterway has had no perceptible effect on the locational stability of industries along its banks, and little value can be placed on the waterway as a major localizing force for new industries. (LSB)

70 . COMMUTER VALUATION OF TRAVEL TIME

Main Investigator: Tom Lisco.

Status of Research and Publications: In process. Completion expected by end of 1966. (Doctoral dissertation; Department of Economics.)

Agency: University of Chicago, Center for Urban Studies, under sponsorship of Resources for the Future, Inc.

Previous Digest Report: None.

Research Problem. To determine what causes commuters to switch from one mode of urban transportation to another. The answer to this question seems to rest in the commuter's valuation of travel time. If values can be assigned to travel time and comfort, for various classes of commuters, the question of who uses what mode of transportation and why may in large part be answered. (LSB)

71. PRIVATE REDEVELOPMENT: PATTERNS AND PROCESSES

Main Investigator: Larry S. Bourne.

Status of Research: Doctoral dissertation, in process. Completion expected summer of 1966. To be published in Research Series, Department of Geography, in late 1966.

Agency: University of Chicago, Center for Urban Studies, under sponsorship of Canadian Council on Urban and Regional Research, in agreement with the Metropolitan Toronto Planning Board.

Previous Digest Report: None.

Research Problem. To examine the nature, location, and impact of private redevelopment activity in the City of Toronto.

Method of Study. (1) Summarize and analyze detailed property redevelopments between 1952 and 1962. (2) Isolate general spatial patterns of change, and relate these to existing theories of urban spatial structure. (3) Analyze the specific nature of the replacement process in the structural stock of the city by comparing individual properties before and after redevelopment. (4) Assess the implications of these trends for public policy. (LSB)

72. TRANSPORTATION AND URBAN STRUCTURE: THE NINETEENTH CENTURY CASE

Main Investigator: Peter G. Goheen.

Status of Research and Publications: Doctoral dissertation, in process. Completion expected in late 1967. To be published in Research Series, Department of Geography, 1968.

Agency: University of Chicago, Center for Urban Studies under sponsorship of Social Science Research Council.

Previous Digest Report: None.

Research Problem. To analyze the changing social historical geography of a large North American city (Toronto) in the late 19th century. The problem is two-fold: to demonstrate that from 1850 to 1900 the social structure of the city was fundamentally rearranged under the impact of technological advances in urban transportation. Second, to analyze the changes in this social structure and to show the process by which the new social spatial structure emerged from the old. (LSB)

73. URBANIZATION AND ECONOMIC DEVELOPMENT IN INDIA

Main Investigator: C. Nirmaladevi.

Status of Research and Publications: In process. (Doctoral dissertation in City and Regional Planning, Harvard University.)

Agency: University of Chicago, center for Urban Studies.

Previous Digest Report: None.

Research Problem. Investigation into demographic aspects of urban patterns in India, to interpret the usefulness of demographic manifestations of socio-economic features in distinguishing urban patterns in underdeveloped countries.

Method of Study. Use of discriminant functions with canonical variates as the main technique of investigation. (CN)

74. RACIAL CHANGE IN SOUTH SHORE, CHICAGO

Main Investigator: Harvey Molotch

Status of Research and Publications: Doctoral dissertation, in process, Department of Sociology. Completion expected June, 1967.

Agency: University of Chicago, Center for Urban Studies.

Previous Digest Report: None.

Research Problem. A detailed examination of the process of racial change in an urban neighborhood, focusing upon the actions of various local community institutions (e.g. churches, neighborhood improvement organizations, civic agencies) as they affect population movements in the area. An assessment is being made of the efficiency of various attempts at racial stabilization in light of larger ecological and economic forces impinging upon the study area. (LSB)

75. TRADE AREAS IN THE METROPOLIS

Main Investigator: Robert J. Tennant

Status of Research and Publications: Doctoral dissertation, in process. Completion expected summer of 1967. To be published in the Research Series, Department of Geography.

Agency: University of Chicago, Center for Urban Studies

Previous Digest Report: None.

Research Problem. A study of consumer travel behavior in the metropolis.

Method of Study. A theoretical model is formulated and tested by empirical studies undertaken in Chicago. The applicability of previous consumer travel models is assessed. The opportunities model is

considered as an alternative to the traditional gravity formulation. Additional factors to be considered are differences in "space preferences" among consumers and differences between kinds of business centers. (LSB)

76. THE SPATIAL PATTERN OF RESIDENTIAL LAND USE IN CITIES

Main Investigator: Richard F. Muth .

Status of Research and Publications: First draft of report completed.

Agency: University of Chicago, Graduate School of Business .

Previous Digest Report: None.

Research Problem. A theoretical and empirical investigation of the determinants of intensity of residential land use and condition of housing in cities. (GT)

77. THE METROPOLITAN COMMUNITY IN THE UNITED STATES, 1960

Main Investigators: Philip M. Hauser and Patricia Hodge.

Status of Research and Publications: In process.

Agency: University of Chicago, Population Research and Training Center, under sponsorship of Social Science Research Council.

Previous Digest Report: None.

Research Problem. A 1960 Census monograph on Metropolitan Communities in the United States as of 1960.

Method of Study. The basic unit of analysis is Standard Metropolitan Statistical Areas (SMSA's) although some analyses of Urbanized Areas are also undertaken. Statistics from the 1960 (and earlier) Censuses of Population and Housing are augmented with data from Censuses of Distribution, Transportation, and Government. The major analytical classifications are groupings of Metropolitan Areas by age, size, regional, and subregional location, and concentration of the labor force in manufacturing. Beginning with a consideration of size and historic growth patterns of SMSA's, the analysis proceeds to a consideration of patterns of concentration, deconcentration, and densities within Metropolitan Areas. Population composition of Metropolitan Areas as of 1960 is considered, including descriptions of central city-suburban ring differentials. The latter is augmented with a methodological examination of different definitions of Metropolitan Area and ring (SMSA ring vs. urban fringe). The study is rounded out with a description of housing and governmental characteristics as well as an analysis of correlates of commutation patterns within selected Metropolitan Areas. (PMH)

78. FACTORS IN THE SELECTION AND DEVELOPMENT OF ORGANIZED INDUSTRIAL DISTRICT SITES IN MASSACHUSETTS

Main Investigator: Gwen Bell.

Status of Research and Publications: Completed and submitted as doctoral dissertation, Clark University, Graduate School of Geography, May, 1966

Agency: Clark University, Graduate School of Geography.

Previous Digest Report: None.

Research Problem. To analyze the sites of organized industrial districts in terms of selection; the controls over site development through zoning ordinances, deed covenants, and site planning; and industrial activities.

Major Findings. Organized industrial districts developed as a land-use form about 1950 and have been successful commercial and community-based projects ever since. The characteristics of their site development have evolved little since the development of the first districts in Massachusetts. The sites selected for organized industrial districts were never ideal. Each site studied lacked between two and six of the following characteristics (each of which was lacking in at least one district): (1) access road, (2) safety from flood, (3) non-intensive land use, (4) favorable zoning, (5) municipal water, (6) municipal sewer, (7) access and visibility from a limited access highway, (8) direct railroad access, (9) good drainage, (10) level surface, (11) clustering to other industrial land uses, (12) favorable previous ownership. Three characteristics stood out as coagulating forces in the development of a particular site: (1) access and visibility from a limited access highway, (2) adjacency to other industrial sites, and (3) previous ownership. In regard to controls over the site, most districts were regulated by community zoning ordinances in terms of use and minimum lot size. For most real-estate broker sponsored districts, deed covenants were attached regulating aesthetic qualities such as location and design of signs, site planning, building materials and landscaping. Two kinds of plans were used for subdivision: a central road plan which was usually open-ended subdividing on demand of the client and a superbloc-type plan for which subdivision usually occurred in advance and clients had the choice of lot selection. Industrial uses of organized industrial districts were characterized by (1) community sponsored districts with locally based manufacturing companies producing a range of products; (2) real-estate broker sponsored districts with a majority of nationally-based firms (a) in the electronics industries (with production, research and development, distribution, and office facilities), (b) with distribution facilities for a range of products, or (c) a combination of (a) and (b). (REM)

79. A CRITICAL TESTING OF THE CONCEPT OF SUBURBS AND SATELLITES: THE BUFFALO, NEW YORK, METROPOLITAN AREA, AS A CASE STUDY

Main Investigator: Paul R. Beaudet

Status of Research and Publications: In process.

Agency: Clark University, Graduate School of Geography.

Previous Digest Report: None.

Research Problem. To test the validity of a concept relating to functional types of suburbs, using the communities within the suburban zone of one metropolitan area as a test case.

Previous Relevant Research. Previous work has concentrated on classifying three categories of suburbs: residential, employing and balanced. Chauncy Harris' study in 1943 was the first classification based on a ratio of employment in manufacturing and trade to the total resident labor force in the community, for places of 100,000 or more. Victor Jones, in 1954, devised an employment-residence ratio based on data similar to that used by Harris, and classified all incorporated places in the United States of 10,000 or more. His classification was updated in 1963.

Hypotheses. (1) Suburbs, satellites and balanced suburbs differ not only in the ratio of resident labor force to the number employed in manufacturing and trade within the community, but in (a) occupations of the resident labor force; (b) home ownership; (c) market value of home; (d) single-family occupancy; (e) rent levels; (f) population densities; (g) residential mobility; (h) commercial, industrial and population growth through time. (2) Differences in these characteristics can be attributed to the residential or employing nature of the community.

Method of Study. The suburban zone of the Buffalo Metropolitan Area was delimited by means of journey-to-work data. All communities (including unincorporated towns as well as incorporated places of less than 10,000) were classified by means of a ratio of the number employed in manufacturing and trade to the total resident labor force. In testing for statistical significance, the following question was asked: are differences between types of suburbs greater than differences within types? Significant differences between the suburb types were tested by means of analysis of variance for each assumption except growth through time. Assumptions relating to historical development and growth of suburbs and satellites were tested by tracing such growth from 1895 to 1964, using county, city, industrial and telephone directories; census data; historical atlases; newspapers and building permit records. (REM)

80. THEORY AND REALITY IN THE USE OF URBAN LAND FOR RESIDENTIAL PURPOSES - THE CASE OF MOBILE HOME PARKS IN MASSACHUSETTS

Main Investigator: Farouk M. El Gammal

Status of Research and Publications: Completed and submitted as a doctoral dissertation.

Agency: Clark University, Graduate School of Geography.

Previous Digest Report: 11:2-10 .

Research Problem. A geographic investigation of mobile home parks in the state of Massachusetts.

Major Findings. (1) The intercity locational pattern of mobile home parks in Massachusetts appears to be areally associated with population distribution, metropolitan areas, main roads and highways, and special-function areas such as military establishments and recreational areas. (2) The pattern indicated that political power structure and the general social order in urban areas are significant factors in the determination of certain types of urban land-uses. (3) Zoning, as a land use regulatory measure affecting the intracity locations of mobile home parks, is often used prejudicially rather than correctively. (4) The factors influencing the decision to live in mobile homes and to select residential sites do not totally correspond with those factors which are often emphasized in urban residential land use models. The notions of "rent gradients", "price curves", and the minimization of the "cost of spatial friction" cannot be considered sufficient in explaining urban residential land-use pattern. (5) The majority of urban communities resent the presence of mobile home parks in their areas. This resentment is based on aesthetic and cultural values. Middle income owner-occupants and high income renter-occupants of regular housing maintain an extreme degree of resentment toward mobile home parks and residents. In general, owner-occupants of regular housing resent the presence of mobile home parks more than renter-occupants do. (REM)

81. CONNECTICUT HISTORIC STRUCTURES AND LANDMARKS SURVEY

Main Investigator: Not reported.

Status of Research and Publications: In process.

Agency: State of Connecticut, Interregional Planning Program, under sponsorship of U.S. Department of Housing and Urban Development

Previous Digest Report: None.

Research Problem. To inventory, analyze and determine a recommended program of action for acquisition, restoration and preservation of historic structures and landmarks in Connecticut.

Method of Study. (1) Obtain preliminary list of historic properties, including both structures and sites, from existing surveys and sources of information.

(2) Update list of historic properties. A team will move from area to area throughout the state, deleting from the preliminary list those sites which have disappeared since the original listings and adding others not covered in previous surveys. (3) Determine criteria appropriate to Connecticut historic buildings and landmarks. (4) Have specialists evaluate the selected properties and choose the most important of these, using criteria described above. (5) Identify from these properties those of great value which presently face most serious threat of destruction and/or decay and for which there is no assurance of preservation. (6) Recommend a long-range program to rehabilitate and preserve such resources. (7) Upon completion of the project, press for recognition by the General Assembly of a continuous appropriately funded program to be directed by the Historical Commission to take such steps as may be necessary to acquire, restore and preserve historic structures and landmarks of major significance. (HHB)

82. STATE GOVERNMENT PARTICIPATION IN THE RENEWAL PROCESS

Main Investigator: Not reported

Status of Research and Publications: In process.

Agency: State of Connecticut, Interregional Planning Program, under sponsorship of U. S. Department of Housing and Urban Development.

Previous Digest Report: None

Research Problem. A demonstration project for the purpose of developing guidelines for more effective participation by state governments in the local renewal process.

Method of Study. (1) Conduct preliminary studies, including the collection, review and analysis of existing pertinent data, e.g. census data, community renewal programs and comprehensive town plans, neighborhood analyses and the reports and records of the 1960 study of blight in Connecticut. (2) Inventory physically blighted neighborhoods on the basis of existing records, supported and supplemented by field inspections; study the social characteristics of selected neighborhoods which are representative of varying types of blight. Analysis of the composition of commercial and industrial firms in blighted areas, supported by photographs and taped interviews illustrative of both physical blight and social disorganization. (3) Analyze factors conducive to the deterioration of neighborhoods, including a review of the growth and subsequent decline of selected neighborhoods which are considered blighted and an analysis of the factors which brought about that condition. (4) Identify specific problems in overcoming and preventing physical deterioration and social disorganization. (5) Measure progress to date in the elimination of blight, including both the volume of substandard structures cleared or rehabilitated and, to the extent that it is possible or feasible, improvements in the living patterns of residents of deteriorated neighborhoods and families which were relocated from substandard housing in deteriorated areas. (6) Develop guidelines for strengthening state participation in the elimination of blight. (HHB)

83. INDUSTRIAL LOCATION IN METROPOLITAN HARTFORD

Main Investigators: W. N. Kinnard, Jr. and others.

Status of Research and Publications: Completion expected June, 1966.
Findings to be published during summer of 1966.

Agency: University of Connecticut, Center for Real Estate and Urban
Economic Studies.

Previous Digest Report: None.

Research Problem. Tabulations and cross-tabulations of all known new locations and relocations of manufacturing plants in a 21-town area around Hartford, Connecticut, during the period 1953-1964. Emphasis is on site and plant characteristics rather than reasons for site selection.

Method of Study. A major portion of the analysis is based upon detailed questionnaire responses from approximately 25% of the affected firms. (GT)

84. INDUSTRIAL LOCATION (PLANT SITE) DATA BANK FOR CONNECTICUT

Main Investigators: W. N. Kinnard, Jr., E. J. DeFulvio and others.

Status of Research and Publications: Completion expected October, 1966.

Agency: University of Connecticut, Center for Real Estate and Urban
Economic Studies.

Previous Digest Report: None.

Research Problem. Data from every known manufacturing plant location or relocation in Connecticut since January 1, 1953, are being placed on IBM cards. Detailed information about site and plant characteristics are included from questionnaire responses of approximately 25%. This will be a continuing study and service. Tabulations, cross-tabulations and analyses will be possible for some 12 attributes and over 30 variables. A descriptive discussion of the process and the available data will be published later. (GT)

85. A COMPUTER MODEL FOR ALLOCATING COUNTY POPULATION PROJECTIONS TO CITIES, TOWNS AND VILLAGES

Main Investigator: Charles B. Notess.

Status of Research and Publications: Final report by September, 1966.

Agency: Cornell University, Cornell Aeronautical Laboratory, Inc.
(Buffalo), under sponsorship of State of New York, Office of
Transportation.

Research Problem. To develop a preliminary computer model for allocating county population projections to cities, towns and villages.

Method of Study. Bases for these projections are the 1950 to 1960 growth rate acted upon by constraints which take into account saturation residential densities and limits to population decreases. Such considerations as accessibility to large urban centers and growth rates in adjacent places also enter the model. Final model coefficients will be based upon regression analyses of a representative metropolitan region. Absolute measures of density and rates of change in density will be used to capture the effect of other factors not specifically used by the model. (CBN)

86. A COMPUTER MODEL FOR PREDICTING TRIP ORIGINS FROM TOWN-SIZE ZONES

Main Investigators: Charles B. Notess and Richard Raub.

Status of Research and Publications: Completed April, 1966. Reported briefly by the investigators in Development of a Preliminary Computer Model for Predicting Trip Origins for 633 Zones in New York State, Report No. VJ-2080-R-1, March, 1966. Cornell Aeronautical Laboratory, Inc., P.O. Box 235, Buffalo, New York 14221.

Agency: Cornell University, Cornell Aeronautical Laboratory, Inc., (Buffalo), under sponsorship of State of New York, Office of Transportation.

Previous Digest Report: None.

Research Problem. To relate the number of trips for six different purposes (to work, to shop, etc.) to socio-economic characteristics of the zone of origin by multiple regression techniques.

Method of Study. The regression coefficients were obtained from analysis of detailed trip data for the Niagara Frontier and used to predict trips in other zones across the state of New York and to project these trips from 1960 to 1990. The final trip origins model used input data obtainable from the U.S. Bureau of Census. These included population, median income, retail and service establishments, and other variables which serve as indices of land-use intensity and type. (CBN)

87. THE SECOND HOME INDUSTRY AS AN ECONOMIC IMPROVEMENT FACTOR IN UNDER-DEVELOPED AREAS: A CASE STUDY OF DELAWARE COUNTY, NEW YORK

Main Investigator: Richard Lee Ragatz.

Status of Research and Publications: In process.

Agency: Cornell University, Department of Agricultural Economics, in cooperation with National Association of Home Builders, under sponsorship of U.S. Department of Agriculture.

Previous Digest Report: None.

Research Problem. A case study of Delaware County, New York, to determine the extent to which the second home industry is an economic improvement factor in an underdeveloped area. Fewer farmers are now realizing a satisfactory living from full-time farming, especially those on marginal land. This also creates an economic hardship for the towns and counties in which they live. Public bodies depend on taxes to operate, but being based on property value, tax rates cannot justifiably be increased on marginal farm land. Although land is necessarily the main resource in counties such as Delaware, often it is under-utilized. Simultaneously, as division of labor, technology, and output increase in cities, urban dwellers experience greater income, leisure time, and higher standard of living. Frequently, provisions for these newly acquired amenities are inadequate. One primary requirement is recreational facilities, of which the second home industry is becoming an important sector.

Hypotheses. Re-allocation of land from marginal agricultural use to second homes should (1) increase the financial capacity of the County by changing its primary tax base; (2) allow the land-poor property owner to regain some of his vanishing wealth by providing a sale opportunity; (3) raise his income potential by allowing him to take a full-time job in an urban area rather than being a part-time farmer with a second job; (4) increase the tertiary income by substituting the higher purchasing power of the new occupants for that of the relatively low income farmers; and (5) provide a foundation for construction and building supply industries in the County.

Method of Study. Send questionnaires to land developers, NAHB members, and builders and distributors of second homes to obtain data concerning building operations, construction techniques, financing, purchaser characteristics, location preferences, etc. Another questionnaire will be sent to absentee property owners of Delaware County. Simple statistical techniques are used to describe the data while a cost-benefit analysis systematizes investigation of the primary hypothesis.
(RR)

88. DECISION THEORY AND METROPOLITAN ECONOMIC GROWTH: A MODEL OF RESOURCE UTILIZATION IN THE CONTEXT OF REGIONAL OPPORTUNITY LOSS

Main Investigator: Phaichitr Uathavikul.

Status of Research and Publications: Doctoral dissertation, to be completed June, 1966. Will be available through University Microfilm service, Cornell University

Agency: Cornell University, Department of City and Regional Planning, under sponsorship of Resources for the Future, Inc

Previous Digest Report: None.

Research Problem. To develop and test a framework for investigating two problem areas often neglected in the analysis of regional economic growth: the problem of decision-making under uncertainty, and potential demand for the goods and services of a region.

Previous Relevant Research. Walter Isard and Thomas A. Reiner, "Aspects of Decision-Making Theory and Regional Science," Papers and Proceedings of the Regional Science Association, Vol. IX (1962); "Use of Statistical Decision Theory in Regional Planning," Papers and Proceedings of the Regional Science Association, Vol. X (1963); Barclay G. Jones, Richard L. Ragatz, and Phaichitr Uathavikul, Regional Analysis for Economic Development: A Demonstration Study of Schoharie County, N.Y., Ithaca, N.Y., Center for Housing and Environmental Studies, Cornell University, 1964 (See Digest 12: 1-53).

Hypotheses. The potential for economic growth and development is a function of the ability of the regional economy to adjust its pattern of resource utilization to take advantage of opportunities, both existing ones and those newly created by changing conditions, in the region as well as in "the rest of the world."

Method of Study. Potential demand for goods and services of a region and its potential output analyzed in a probabilistic framework. Results then compared with existing patterns of resource utilization to arrive at conclusions about the efficiency of the regional economy. For testing purposes, data from the United States and fourteen selected standard metropolitan statistical areas are analyzed at the level of aggregation of the SIC (Standard Industrial Classification) Major Groups (two-digit). (PU)

89. DISPOSAL OF THE PUBLIC DOMAIN AND DEVELOPMENT OF THE LAND-USE PATTERN IN CALIFORNIA (RURAL)

Main Investigator: Paul W. Gates.

Status of Research and Publications: In process. Completed research to be published as a book under the above title, with a companion volume on agricultural history of California, 1846-1862. Findings to date reported in "Adjudication of Spanish and Mexican Land Claims in California," The Huntington Library Bulletin, XXI (May, 1958), pp. 213-236; "California's Agricultural College Lands," Pacific Historical Review, XXX (May, 1961), pp. 103-122; and "California's Embattled Settlers," California Historical Society Quarterly, XLI (June, 1962), pp. 99-130. Article entitled "Pre-Henry George Land Warfare in California," to appear soon in California Historical Society Quarterly.

Agency: Cornell University, Department of History, with support from Huntington Library and the Social Science Research Council.

Previous Digest Report: None

Research Problem. A descriptive study of the operation of federal and state land systems in California. Special emphasis is upon the transfer of land to private ownership and analyses of the uses to which the early transfers were put. Because of the Mexican grants which were loosely construed by the courts, and some unique ways in which the swamp and education land grants were permitted to pass into private ownership, the transfer of lands from governmental to private ownership in California varies greatly from that of other states. In this uniqueness also seems to lie the factors responsible for the great concentration of ownership which exists in the state today, such as the huge holdings of the Kern County Land Company and the Tejon Land Company.

Method of Study. Study and analysis of land transfer records of the federal and state governments, county deed records, metropolitan and rural newspapers and manuscript collections, mainly those in the Bancroft and Huntington Libraries, and the State Department of History and Library. (PWG)

90. A STUDY OF AMERICAN STATES

Main Investigator: Terry Sanford.

Status of Research and Publications: Completion expected June, 1967.

Several publications are planned, in article and book form. The first, Terry Sanford, "Poverty's Challenge to the States," appeared in Law and Contemporary Problems, Winter, 1966.

Agency: Duke University, under sponsorship of Ford Foundation and the Carnegie Corporation.

Previous Digest Report: None.

Research Problem. Study the future role of state government in the federal system to determine (1) how the states can exercise their responsibilities more effectively and efficiently, and (2) the proper relationship of the states to each other and to the federal government.

Specific areas of investigation are: (1) Study of the present and potential roles of state governments in respect to their major service functions and in partnership with the federal government and the other states. (2) Analysis of the methods by which the states might maintain continuity and stability of programs under an elective system. (3) Analysis of the various approaches which might be taken to alleviate long-standing problems such as judicial reorganization, constitutional revision and legislative reform. (4) Study of the methods by which states can mobilize the necessary resources to meet the new challenges of society -- including the need to find increased revenues, use of multi-state approaches and redefinition of the federal-state partnership. (5) Study of how government, state government in particular, can become more creative in its approach to problems. (6) Study of how the public can be made more aware of the importance of state governments and what the future of federalism is.

Methods of Study. (1) Examination of existing research. (2) Surveys of state administrative problems conducted monthly through the governors' offices in each state. Subjects have included budgeting, planning, the anti-poverty program, state revenues, and the role of boards and commissions. (3) Visits to a representative sample of states and interviews conducted with people knowledgeable about state government and its problems. (4) Panels of experts and people knowledgeable about the states are called into conference periodically. These include political scientists, ex-governors, working press covering state government, and administrators concerned with urban and metropolitan problems. (TS)

91. EDUCATION IMPROVEMENT PROGRAM FOR DURHAM, NORTH CAROLINA

Main Investigators: Robert L. Spaulding and Donald J. Stedman.

Status of Research and Publications: A five-year program in process.
Publications to be issued periodically.

Agencies: Duke University, Department of Education; North Carolina College; Durham City and County Schools, and Operation Breakthrough (CAP), under sponsorship of the Ford Foundation.

Previous Digest Report: None.

Research Problem. Develop a "model system" within the public school systems of Durham City and County to provide longitudinal stimulation to a large group of culturally deprived children at early and varied stages of their lives.

Some children will begin the program in the first few days of life in an Infant Evaluation Project designed to observe systematically and monitor their behavior and assure them a healthy start in life. Others will begin in a Nursery School Segment designed to stimulate and encourage the early, successful use of communication, socialization, and motor skills. Still others will begin at Preschool level where readiness, independence and expansiveness are encouraged. Finally, others will begin school in special Ungraded Primary Classes focusing on a reading and continuous developmental educational program. Since children will move into the model system at different levels, an opportunity is presented whereby the effects of early psycho-educational programs can be measured as a function of time entry. A Future Parent Program will attempt to intervene in the cycle which visits poverty upon the children of the poor, by providing information and insight into parent roles to poverty-area youngsters while still in their early teens.

Method of Study. In the educational sequence, method of study includes observation of children in on-going classroom situations, as well as testing and other psychological and educational measurements. (EP)

92. THE INTERRELATIONS BETWEEN RIVER BASIN DEVELOPMENT AND THE DEVELOPMENT OF METROPOLITAN AREAS

Main Investigators: Guy J. Kelnhofer, Jr. and D. N. Isley.

Status of Research and Publications: In process.

Agency: Georgia Institute of Technology.

Previous Digest Report: None.

Research Problem. Study the interrelations between the effects of river improvement proposals on the growth and development of metropolitan areas and the effect of metropolitan growth on the functioning of the river. Ways to achieve more effective coordination between river basin and metropolitan area development will be suggested. (GT)

93. THE EFFECT OF CHANGING LOCATION PATTERNS, TECHNOLOGY AND CONSUMER DEMANDS ON U. S. FREIGHT TRANSPORTATION

Main Investigator: David J. Behling, Jr.

Status of Research and Publications: In process.

Agency: Harvard University, Harvard Economic Research Project, under sponsorship of Resources for the Future, Inc.

Previous Digest Report: None.

Research Problem. Identify and quantify major causes of changes in both the level of freight transportation output and in the mix of different modes of freight transportation from 1947 to 1958, and to project the level and mix of freight transportation output to 1970 and 1980.

Previous Relevant Research. Eugene D. Perle, The Demand for Freight Transportation: Regional and Commodity Studies in the United States, Chicago: University of Chicago Press, 1964.

Hypothesis. (1) The major cause of shifts in relative shares has been the change in the composition of products carried by the transportation system. (2) On balance, technological change has been "weight-losing" and consumers are purchasing relatively more light-weight, high-value goods, so that freight transportation tonnage is growing at a slower rate than real G.N.P. (3) Products are being transported shorter distances due to the decentralization of industry with respect to the location of raw material suppliers and final consumers. (4) Changes in the level and mix of freight transportation output can be estimated on the basis of predicted changes in final consumption patterns, technology and industry location patterns.

Method of Study. Study will develop an input-output model of freight transportation incorporating three sets of parameters: location,

technology, and final demand parameters. Estimates for each of the three sets will be obtained for the years 1947 and 1958, and computations made to determine the effects of changes in each set of parameters from 1947 to 1958 on both the total freight ton-mile output and on the relative shares obtained by the different modes of freight transportation. Each set of parameters will be estimated for the years 1970 and 1980 in order to estimate the 1970 and 1980 level and mix of freight transportation output. (DJB,Jr.)

94. CHILDREN OF MENTALLY ILL PARENTS IN DEPRIVED URBAN AREAS

Main Investigator: Leo Miller.

Status of Research and Publications: Completion expected in 1967.
"Hospitalization of a Parent for Mental Illness: A Crisis for Children" to be published in American Journal of Orthopsychiatry.

Agency: Harvard University, School of Public Health, under sponsorship of National Institute of Mental Health.

Previous Digest Report: None.

Research Problem. A demonstration study of the impact on children of mentally ill parents who come to the emergency rooms of two general hospitals and are usually advised to return home to seek outpatient psychiatric care. Half the group will have the benefit of the intensive services of a social caseworker, and the other half will have no services offered them by the study. The two groups will then be compared in relation to the types of problems found in the demonstration control families and the effect of the demonstration services on the demonstration families. (EPR)

95. TRANSPORTATION ASPECTS OF LAND USE-CONTROLS

Main Investigator: Harold Marks.

Status of Research and Publications: Completion of final manuscript expected June, 1966.

Agency: Highway Research Board, through contract with Victor Gruen Associates.

Previous Digest Report: None.

Research Problem. To provide a better understanding of the various ways of preserving the utility of transportation systems to the benefit of both the community and the users.

Method of Study. Collection of data from relevant literature and a canvass of selected highway departments and other agencies and individuals concerned with transportation planning. (HM)

96. SERVICE NEEDS OF MOTORISTS USING INTERSTATE HIGHWAY SYSTEM

Main Investigator: Not reported.

Status of Research and Publications: In process.

Agency: Highway Research Board, under contract to Cutler-Hammer Airborne Instruments Laboratory (Deer Park, Long Island, New York).

Previous Digest Report : None.

Research Problem. Determine the needs and desires of motorists for services on and near the Interstate System. These services include fuel, food, lodging, information, automotive repair, and emergency medical facilities. Learn to what extent these needs and desires are being met and how adequate they are. Recommend how the needs should most appropriately be met in the future. Special attention will be given to the legal and financial implications of providing the services. (DHB)

97. RELATIONSHIP OF HIGHWAY DESIGN AND VEHICLE CONSTRUCTION

Main Investigator: Not reported.

Status of Research and Publications: In process.

Agency: Highway Research Board, through contract with Cornell Aeronautical Laboratory.

Previous Digest Report. None.

Research Problem: Find new approaches to the problem of relating highway design criteria to vehicle design and operating characteristics. Vast changes in the vehicle over the years have not been matched by corresponding changes in the more than 3,000,000 miles of roads and streets in America's highway plant. As a prelude, however, two important factors must be determined: (1) which portions of highway design and traffic operation procedures really need to be based on vehicle characteristics; (2) what more do we need to know about vehicle characteristics to satisfy these requirements.

Method of Study. Search current data and existing sources of information to determine what data concerning the necessary vehicle characteristics are available and usable; identify characteristics that need to be quantified for vehicles now on the road as well as those which may be designed in the next twenty years. (DHB)

98. BETTER WAYS TO GATHER AND USE AUTO ACCIDENT DATA

Main Investigator: Not reported.

Status of Research and Publications: In process.

Agency: Highway Research Board, through contract with Cornell Aeronautical Laboratory.

Previous Digest Report: None.

Research Problem. (1) Determine the accuracy and adequacy of present accident reporting and recording methods and how they are being used. (2) Develop an accident-information system involving collection, analysis and data use that will reveal more accurately the basic causes of accidents. (3) Develop measures and guidelines for both short-range and long-range highway improvement programs to help cut highway accidents. (4) Determine major areas of need for further highway safety research and outline the problems and objectives for such research. (DHB)

99. LONG-RANGE FRAMEWORK FOR NATIONAL HIGHWAY RESEARCH NEEDS

Main Investigator: Not reported.

Status of Research and Publications: In process.

Agency: Highway Research Board through contract with Wilbur Smith and Associates and Bertram D. Tallamy and Associates.

Previous Digest Report: None.

Research Problem: Identify highway research needs in relation to overall transportation-related research requirements and objectives. Needed research items will be arranged in a "structure tree" and will include information about priority of need as well as an estimate of how much the research might be expected to cost.

Method of Study: (1) Review available literature describing existing highway-related research activities. (2) Interview state highway officials, universities, trade associations, foundations, government agencies, industry and other appropriate highway-oriented groups to learn of their most pressing problems. (3) Conduct a symposium to help determine long-range needs. Participants will represent various highway-oriented fields. (4) Analysis and evaluation of information to identify the main general problem areas related to transportation. (5) Assignment of research need priorities based on importance in relation to established goals, identifiable economic and social benefits, probable time and cost, likelihood of early completion, and potential for practical application by operating engineers. (DHB)

100. EFFECT OF HIGHWAY LANDSCAPING ON ADJACENT PROPERTY VALUES

Main Investigator: Not reported.

Status of Research and Publications: In process.

Agency: Highway Research Board, through contract with Franklin Institute Research Laboratories.

Previous Digest Report: None.

Research Problem: To determine whether landscape development can make modern highways compatible with nearby land use, and to what extent landscaping of the right-of-way makes certain features of free-way design acceptable to residential and other nearby land uses. Efforts will be made to determine the comparative effects of different basic types of landscape treatments. (DHB)

101. MULTIPLE USES OF LAND WITHIN HIGHWAY RIGHTS-OF-WAY

Main investigator: Harvey R. Joyner.

Status of Research and Publications: In process. To be completed and final report issued January, 1967.

Agency: Highway Research Board, through contract with Barton-Aschman Associates.

Previous Digest Report: None.

Research Problem. To ascertain what has been and what might be accomplished with plots of land not currently being used, but which are within the rights-of-way of fully controlled access highways. Highways in urban and rural areas include land which was acquired to provide space for the present and future safe design and operation of highways, but which is not now used, i.e., areas within median strips, at interchanges, under elevated structures or bridges, and alongside roadways, all within functional rights-of-way. Air and subsurface rights and uses are not being considered in this project.

This land could conceivably be used for parking; parks, playgrounds or other recreational or rest areas; scenic parking or conservation uses; commercial or industrial use; government buildings or storage; or for stations and transit facilities as in connection with express bus uses. (HRJ)

102. FLY ASH MONITOR

Main Investigators: A. Lieberman and Herbert G. Poertner.

Status of Research and Publications: Phases I and II completed. Completion of Phase III expected by August, 1967. Findings to be published in mimeographed form.

Agency: Illinois Institute of Technology, Research Institute, in co-operation with the American Public Works Association Research

Foundation, under sponsorship of the U.S. Public Health Service and 14 local units of government.

Previous Digest Report: None.

Research Problem. To develop an instrument for continuous monitoring of particulate matter from central incinerator stacks. In Phase III, the monitoring instrument will be used on incinerator stacks in the field to establish these parameters: (1) To what extent is single point sampling representative of stack emissions? What are the limitations of an instrument that does not include automatic, isokinetic sampling? (2) What is the range and variability of stack conditions under which the instrument will operate? What instrument criteria, if any, should be changed to meet these conditions? (3) What are the minimum instrument specifications and sampling procedures required for a test instrument?

Method of Study. Actual test data and a complete evaluation of instrument parameters in the field. All specifications will include instrument criteria and sampling procedures dependent on instrument usage. (HGP)

103. ECONOMIC ASPECTS OF THE PESTICIDE PROBLEM

Main Investigators: J. C. Headley and J. N. Lewis.

Status of Research and Publications: In process. Publication anticipated in late 1966, under title The Pesticide Problem: An Economic Approach to Public Policy.

Agency: University of Illinois, Department of Agricultural Economics, under sponsorship of Resources for the Future, Inc.

Previous Digest Report: None.

Research Problem. To develop guidelines for public policy addressed to control of development, manufacture and use of chemical pesticides to achieve optimal quality of the environment.

Hypotheses. (1) Concepts of economic analysis can produce a framework indicative of an optimal level of pesticide pollution of the natural environment. (2) Empirical estimates of the contribution of chemical pesticides to agricultural output can be made and used as a basis of social benefit trade-offs in comparing alternative forms of pest control.

Method of Study. The study has been divided into two phases: (1) The problem of pesticide pollution and its resultant potential social costs was reviewed and placed in the context of economic decision making. In addition, research needs and previous policy were evaluated within the decision framework and recommendations concerning needed data, apparent policy changes, and new research approaches were made. (2) Attempts have been and are being made to relate changes in agricultural output on a national and regional basis to pesticide and other inputs in order to assess the contribution of pesticides to agricultural output. These

measures will be used as criteria for recommending the amount and kind of research in pest control with the highest social payoff.

Major Findings. Findings indicate that the solutions available are many and can diverge markedly from single dimension solutions that consider only biological or productivity values. In addition, regional differences in the apparent productivity of pesticide inputs are sizable and suggest a flexible policy in dealing with these materials.
(JCH)

104. A PROTOTYPE PROCEDURAL FRAMEWORK FOR COMPREHENSIVE METROPOLITAN PLANNING

Main Investigator: Willard B. Hansen.

Status of Research and Publications: In process. Publication of a technical monograph anticipated in 1967. Progress of work being reported in the form of interim technical papers, beginning February, 1966.

Agency: University of Illinois, Bureau of Community Planning.

Previous Digest Report: None.

Research Problem: To construct a prototype procedural framework with general applicability to the comprehensive planning of large U. S. metropolitan regions during the latter 1960's.

Previous Relevant Research. Analyses of the overall logic and structure of "comprehensive planning" by Branch, Davidoff and Reiner, Dror, Heikoff and others; detailed operations programs for several recent U. S. metropolitan land-use/transportation planning projects.

Hypotheses. Comprehensive metropolitan planning (a) is a conceptually distinct and operationally feasible activity, (b) is rapidly finding acceptance in the United States as a needed function of government, (c) could and should benefit significantly from the development of prototype procedural frameworks that detail the planning process in its entirety as a guide for operating practice.

Method of Study. The prototype procedural framework will be evolved through several progressively more amplified versions into a document which, upon adaptation by individual agencies, could serve as a relatively specific work prospectus for the comprehensive planning of U.S. metropolitan regions having a population of one million or over.

The contemplated framework is to detail the comprehensive metropolitan planning process as an integrated system of technical, administrative and political operations. It is, moreover, to be grounded in the institutional context of a specified time period and set of metropolitan regions. Its prescriptive scope--i.e., the set of proposal types designated as subject to recommendation--will embrace action categories having major metropolitan-wide significance,

requiring middle or long range formulation and responding directly to governmental initiative. In light of circumstances anticipated for the latter 1960's, such a prescriptive scope would cover service programs as well as physical facilities.

The investigation will draw on conditions in the Chicago Metropolitan Region to illustrate the overall environment in which comprehensive metropolitan planning may be expected to take place during the foreseeable future. (WBH)

105. SOCIAL FACTORS ASSOCIATED WITH TRAFFIC GENERATION IN A METROPOLITAN AREA OF 75,000 POPULATION

Main Investigator: Robert W. Janes.

Status of Research and Publications: Completed. To be published as a Bulletin of the Engineering Experiment Station, University of Illinois, Urbana, Illinois, by August, 1966.

Agency: University of Illinois, Department of Sociology, under sponsorship of State of Illinois, Division of Highways, and U.S. Bureau of Public Roads.

Previous Digest Report: None.

Research Problem. To determine whether socio-economic factors might be a reliable basis for predicting traffic generation in the various zones of an urban area.

Previous Relevant Research. Detroit Traffic Study (Report on the Detroit Metropolitan Area Traffic Study, Part I, July, 1955; Part II, July, 1956), Detroit, Michigan; Chicago Area Transportation Study, Vol. I, December, 1959; Vol. II, July, 1960; Vol. III, April, 1962.

Hypothesis. Variations in socio-economic characteristics of households accounts in large measure for differences in the production of traffic by various zones of a community.

Method of Study. An origin-destination survey of the Champaign-Urbana area was conducted in 1958. The survey included roadside interviews and 4,400 household interviews. Statistical analysis of the data was made to determine relationships between socio-economic factors of households and the actual number and length of trips made.

Major Findings. (1) Socio-economic levels of households, as estimated per survey zone, showed relatively high association with trip generation by zone. A multiple correlation using such measures of socio-economic level accounted for about two-thirds of the statistical variance between these variables. (2) Although socio-economic level of household is most highly associated with trip generation by survey zone, traffic generation appears to be a multi-factor phenomenon in which other influences were not clearly delineated in the study. (3) The distribution of distances traveled from zone of origin appeared to be directly propor-

tional to the number of distances of all survey zones from each other. Distances traveled, therefore, appeared limited by a physical dimension while generation of trips appeared to be a product of socio-economic influence. (ED)

106. IMPROVING QUALITY OF HOUSING ENVIRONMENTS THROUGH COOPERATIVE ACTION OF GOVERNMENT AGENCIES AND THE DESIGN PROFESSIONS

Main Investigator: Robert D. Katz.

Status of Research and Publications: In process.

Agency: University of Illinois, Department of Urban Planning.

Previous Digest Report: None.

Research Problem. To determine how effective joint action on the part of European government housing agencies, responsible for broad community needs, and individual architects and other professionals, trained in building design and housing site layout, can be coordinated. Three questions will be examined: (1) How have government housing agencies been able to draw upon the skills of the professional in the over-all design process? (2) How have architects and other designers been able to adapt their outlook and sense of values to reflect the needs of a comprehensive housing program? (3) What programs and procedures seem to have produced the most effective results and what modifications of American practice seem to be called for?

Previous Relevant Research. Robert D. Katz, "Residential Densities," Council of Planning Librarians Exchange Bibliography #18, Berkeley, 1961; "Quality in High-Density Housing," Proceedings of 17th Annual Short Course in Residential Construction, University of Illinois, Small Homes Council-Building Research Council, Champaign-Urbana, Illinois, 1962; Intensity of Development and Livability of Multi-family Housing Projects - Design Qualities of European and American Housing Projects, United States Federal Housing Administration, Washington, 1963; "Relationship of Density to Livability," Building Research, Vol.1, No. 1, Building Research Institute, Washington, 1964.

Method of Study. Study Government-assisted housing programs in the Netherlands, Sweden, England and Italy. Interview government officials and architects to identify the part played by the architect in his capacity as designer, public agency officer and review consultant in government housing programs; visit architectural schools and professional institutes to learn how community needs are introduced into design curricula; visit housing sites to examine design accomplishments that have resulted from various housing programs. Recent construction in all parts of the United States has been studied, over 500 separate housing sites visited and hundreds of government officials, architects, urban planners and others active in the design, financing and administration of housing programs in the U.S., interviewed.

107. STATISTICAL PROPERTIES OF PREDICTIVE MODELS

Main Investigator: William Alonso.

Status of Research and Publications: In process.

Agency: Joint Center for Urban Studies of Massachusetts Institute of Technology and Harvard University.

Previous Digest Report: None.

Research Problem. A study of the statistical properties of predictive models.

Major Findings. Quantitative predictive models are increasingly used for studying urban systems. However, no significant attention has been paid to the relation of the accuracy of measurements to the form of specification of the models. Preliminary work indicates that optimal prediction involves consideration of these two factors. Certain correct formulations may result in significant compounding of error. Other preliminary findings indicate that a distinction may be drawn between efficient research models and efficient predictive models; and that models used in developed societies may often not be transferable to underdeveloped areas.
(CRL)

108. THEORY OF RENT AND LOCATION: A GENERALIZATION

Main Investigator: William Alonso.

Status of Research and Publications: In process.

Agency: Joint Center for Urban Studies of Massachusetts Institute of Technology and Harvard University.

Previous Digest Report: None.

Research Problem. To write the location and rent theories by means of dimensional analysis and through the use of force vectors. (CRL)

109. SIZE OF CITIES IN ECONOMIC DEVELOPMENT

Main Investigator: William Alonso.

Status of Research and Publications: In process. Most of the theoretical analysis has been completed. Empirical tests being designed to measure effects of external economies on productivity.

Agency: Joint Center for Urban Studies of Massachusetts Institute of Technology and Harvard University.

Previous Digest Report: None.

Research Problem. The effect of a city's size upon its economic development. Most literature on city size focuses on the changes in cost with size, but heretofore no attention has been paid to changes in productivity with size. (CRL)

110. PARTICIPATION OF LOW-INCOME PEOPLE IN PLANNING

Main Investigator: Michael Appleby.

Status of Research and Publications: In process.

Agency: Joint Center for Urban Studies of Massachusetts Institute of Technology and Harvard University.

Previous Digest Report: None.

Research Problem. A study of how problems of communication, life style conflict, and differing standards of political action affect efforts to secure involvement of lower or working class groups in social and physical planning programs.

Method of Study. Two programs, in New York and New Haven, embodying different approaches to their low-income constituents are being analyzed and compared. (CRL)

111. PERCEPTION AND VALUE IN A NEW CITY

Main Investigator: Donald Appleyard.

Status of Research and Publications: Research completed. Manuscript in preparation.

Agency: Joint Center for Urban Studies of Massachusetts Institute of Technology and Harvard University, under sponsorship of Corporacion Venezolana de Guayana.

Previous Digest Report: 11:2-66 .

Research Problem. A study of collective and group perception in a newly developing city in Venezuela. The effects of environmental character, structure, function and change on operational conceptual schemata were measured. Principal modes of representation, structuring and their environmental values were explored. Recommendations for further design of the city will be proposed. (CRL)

112. COMPUTER MODEL OF SEGREGATION PROCESSES

Main Investigator: James M. Beshers.

Status of Research and Publications: In process.

Agency: Joint Center for Urban Studies of Massachusetts Institute of Technology and Harvard University.

Previous Digest Report: None.

Research Problem. Development of a mathematical model suitable for computer simulation to represent the historical process of diffusion of racial and ethnic groups throughout the residential areas of American cities. (CRL)

113. THE STRUCTURE AND EFFICIENCY OF LOCAL RETAIL MARKETS

Main Investigator: Maureen Brunt.

Status of Research and Publications: In process.

Agency: Joint Center for Urban Studies of Massachusetts Institute of Technology and Harvard University.

Previous Digest Report: None.

Research Problem. A comparative study of market structure and competitive behavior in leading retail trades in the United States, Great Britain and Australia.

Method of Study. Prime importance is given to the use of location theory and the analysis of location data for urban areas such as Boston, Cleveland and Melbourne. (CRL)

114. POLITICS AND PLANNING IN LONDON

Main Investigator: Stephen Elkin.

Status of Research and Publications: In process.

Agency: Joint Center for Urban Studies of Massachusetts Institute of Technology and Harvard University.

Previous Digest Report: None.

Research Problem. The first half of the study consists of three large case studies of planning decisions in the County of London. The second half is an analysis of these studies, focusing on attitudes of planners, definitions of planning, politics and a comparison with U. S. experience. (CRL)

115. EXPERIMENTS ON INDIVIDUAL VALUES AND THE FORM OF THE CITY

Main Investigator: Aaron Fleisher.

Status of Research and Publications: In process.

Agency: Joint Center for Urban Studies of Massachusetts Institute of Technology and Harvard University.

Previous Digest Report: None.

Research Problem. Experiments to demonstrate the extent of mutual dependence of location choice, travel and transportation system in a mixed urban population. (CRL)

116. THE ACQUISITION AND ORGANIZATION OF AN URBAN DATA LIBRARY

Main Investigator: Aaron Fleisher.

Status of Research and Publications: In process.

Agency: Joint Center for Urban Studies of Massachusetts Institute of Technology and Harvard University.

Previous Digest Report: None.

Research Problem. Between the census and a proliferation of urban studies there exists a considerable accumulation of data, whose storage, retrieval, perusal and manipulation the computer makes more convenient. The purpose of this project is to contrive programs by which such data can be used and managed by persons with no programming skills. (CRL)

117. AN ECONOMIC DEVELOPMENT PROGRAM FOR THE BOSTON AREA

Main Investigator: Alexander Ganz.

Status of Research and Publications:: In process.

Agency: Joint Center for Urban Studies of Massachusetts Institute of Technology and Harvard University.

Previous Digest Report: None .

Research Problem. Analysis of postwar growth of the Boston metropolitan area, and preparation of an overall economic development program, including (1) expanding needs for public services, (2) research development and promotion of private industry and service activities; (3) consumer demand, (4) manpower demand and supply, (5) housing and urban services, (6) transportation needs, (7) urban space requirements, and (8) finances. (CRL)

118. URBAN DEVELOPMENT AND U. S. ECONOMIC GROWTH

Main Investigator: Alexander Ganz.

Status of Research and Publications: In process.

Agency: Joint Center for Urban Studies of Massachusetts Institute of Technology and Harvard University.

Previous Digest Report: None.

Research Problem. (1) Analysis and measurement of the significance of postwar patterns of urban-suburban development and their role in U. S. economic growth; (2) projection of alternative patterns of urban development, urban services requirements of an expanding economy, and their potential incidence on overall economic performance of the U.S. (CRL)

119. DISCRETION AND DECISION-MAKING IN THE ADMINISTRATION OF CRIMINAL JUSTICE

Main Investigator: John A. Gardiner..

Status of Research and Publications: Completed and submitted as doctoral dissertation. Manuscript being revised for possible publication.

Agency: Joint Center for Urban Studies of Massachusetts Institute of Technology and Harvard University.

Previous Digest Report: 11:2-46.

Research Problem. A study of the administration of criminal justice, primarily in Massachusetts, to find out which governmental agencies make major decisions as to how the criminal laws will be enforced. (CRL)

120 . THE RUSSIAN CITY IN THE EIGHTEENTH CENTURY

Main Investigator: James Michael Hittle.

Status of Research and Publications: In process.

Agency: Joint Center for Urban Studies of Massachusetts Institute of Technology and Harvard University.

Previous Digest Report: None.

Research Problem. A broad survey of urban life in 18th century Russia. Emphasis will be on the development of the trade and industrial population and on its role in the economic, social and political life of the country. (CRL)

121. ECONOMETRIC ANALYSIS OF THE DETERMINANTS OF AUTOMOBILE OWNERSHIP

Main Investigator: John Kain.

Status of Research and Publication: In process.

Agency: Joint Center for Urban Studies of Massachusetts Institute of Technology and Harvard University.

Previous Digest Report: None.

Research Problem. A cross-sectional evaluation of the determinants of automobile ownership for 1950 and 1960 and evaluation of changes in the level of car ownership for the decade 1950-1960.

Method of Study. Use of automobile registration data for 1950 and 1960 for jurisdictions of over 2500 population in ten states, obtained from the R. L. Polk Company, combined with census data for the same years. (CRL)

122. CAR OWNERSHIP AND RESIDENTIAL DENSITY

Main Investigator : John Kain.

Status of Research and Publications: In process.

Agency: Joint Center for Urban Studies of Massachusetts Institute of Technology and Harvard University.

Previous Digest Report: None.

Research Problem. Evaluate the interrelationships between residential density and automobile ownership. Transportation studies assume the level of car ownership is heavily dependent upon the level of residential density and use net residential density to explain current and predict future levels of automobile ownership. Land use planners are just as insistent that low density residential development is the result of increased car ownership. This study develops a number of econometric models for evaluating the interrelationships of these two variables and the relationship of each to income, family size, labor force participation, employment distributions and other determinants of car ownership and residential density.

Method of Study. Use of data obtained from the London Traffic Survey. (CRL)

123. INTERCITY MODELS OF AUTOMOBILE OWNERSHIP AND TRANSIT USE

Main Investigator: John Kain.

Status of Research and Publications: In process.

Agency: Joint Center for Urban Studies of Massachusetts Institute of Technology and Harvard University.

Previous Digest Report: None.

Research Problem. A study of intercity automobile ownership and transit use.

Method of Study. Data on automobile ownership and transit use in the central cities and suburban areas of the 65 largest urbanized areas obtained from the 1960 Census of Population used as dependent variables in cross section multiple regression models. Explanatory variables include income, the proportion of the central city labor force employed in the central city, measures of central city and suburban residential density, measures of the age of central city development, family size, central city population and labor force participation rates. (CRL)

124. REDISTRIBUTIVE EFFECTS OF LOCAL PUBLIC FINANCE

Main Investigator: Martin Katzman.

Status of Research and Publications: In process.

Agency: Joint Center for Urban Studies of Massachusetts Institute of Technology and Harvard University.

Previous Digest Report: None.

Research Problem. To measure the incidence of taxes and expenditures resulting from decisions of local government, by income and ethnic group, in the city of Boston and two or three suburbs.

Method of Study. The first step is to calculate dollar flows of expenditures to various groups. The second step is to estimate quality or quantity flows emanating from the dollar expenditures. These physical measures are then correlated with income and ethnic characteristics of the recipients. Utilizing given information about the distribution of the tax burden, the incidence of taxes is then compared to the indices of benefits. (CRL)

125. STRUCTURE OF MUSLIM CITIES

Main Investigator: Ira Lapidus.

Status of Research and Publications: Completed and submitted as doctoral dissertation. Revised form to be published as book by Harvard University Press.

Agency: Joint Center for Urban Studies of Massachusetts Institute of Technology and Harvard University.

Previous Digest Report: 11:1-49.

Research Problem. Economy and social structure of Muslim cities of the eastern Mediterranean--Cairo, Alexandria, Damascus and Aleppo in the late middle ages. Though concentrating on these cities, the project attempts to develop a framework for the comparative analysis of premodern cities in the larger region. (CRL)

126. PROGRAMS TO COMBAT JUVENILE DELINQUENCY

Main Investigators: Norton E. Long and Stephen Thernstrom.

Status of Research:and Publications: Completed. Report submitted to sponsor.

Agency: Joint Center for Urban Studies of: Massachusetts Institute of Technology and Harvard University, under sponsorship of U.S. Department of Health, Education and Welfare.

Previous Digest Report: 11:2-52 .

Research Problem. To design and help implement a study of the historical materials of nine projects funded under the Juvenile Delinquency and Youth Offenses Control Act of 1961. (CRL)

127.. SUBURBAN DELINQUENCY

Main Investigator:: Walter Miller.

Status of Research and Publications: In process.

Agency: Joint Center for Urban Studies of: Massachusetts Institute of Technology and Harvard University.

Previous Digest Report: None.

Research Problem. To collect and analyze data on the nature and extent of youth crime in suburban areas of Boston. In its initial stages, the study has four main objectives: (1) the derivation of statistical correlations between volume of youth crime and several indexes of social status in about 100 near-Boston suburbs; (2) examination of specific forms of suburban youth crime to ascertain possible differences from urban crime; (3) development of time trends with respect to the first two objectives; (4) addressing the question of whether present character of suburban delinquency reflects changes in moral standards of middle class suburban youth. (CRL)

128 . PEOPLE AND SOCIAL PLANNING

Main Investigator: Lisa Peattie.

Status of Research and Publications: In process.

Agency: Joint Center for Urban Studies of Massachusetts Institute of Technology and Harvard University.

Previous Digest Report: None.

Research Problem. An examination of the relationship between "the poor" and the institutions which intend to service and/or represent

them, or more generally, the relationships between individuals and technically-organized institutions in a complex society. (CRL)

129. GUAYANA PROJECT: SOCIAL CHANGE IN A RAPIDLY GROWING CITY (SANTO TOME, VENEZUELA)

Main Investigator: Lisa Peattie.

Status of Research and Publications: Research completed. First draft of book completed.

Agency: Joint Center for Urban Studies of Massachusetts Institute of Technology and Harvard University, under sponsorship of Corporacion Venezolana de Guayana.

Previous Digest Report: 11:2-61.

Research Problem. A description of the processes of social mobility and social change in a rapidly growing city, Santo Tome in Venezuela, based on two and a half years of field work and centered on how these processes may be looked at from and in one small neighborhood of the developing city. (CRL)

130. SOCIAL PSYCHOLOGICAL MODELS OF THE DESEGREGATION PROCESS

Main Investigator: Thomas Pettigrew.

Status of Research and Publications: In process.

Agency: Joint Center for Urban Studies of Massachusetts Institute of Technology and Harvard University.

Previous Digest Report: None.

Research Problem. To derive multilevel models of the desegregation process in the South and urban North, considering both its social structural and psychological dimensions. (CRL)

131. LOCAL GOVERNMENT FINANCES IN THE UNITED STATES

Main Investigator: George Pidot.

Status of Research and Publications: In process.

Agency: Joint Center for Urban Studies of Massachusetts Institute of Technology and Harvard University.

Previous Digest Report: None.

Research Problem. Investigate the purposes for which local governments spend their money, the sources from which they finance their outlays, and the factors which affect their budget process. (CRL)

132./ NATIONAL POLICY FOR URBAN AND REGIONAL DEVELOPMENT

Main Investigator: Lloyd Rodwin.

Status of Research and Publications: Research completed. Book in preparation.

Agency: Joint Center for Urban Studies of Massachusetts Institute of Technology and Harvard University, under sponsorship of Olivetti Foundation.

Previous Digest Report: 11:2-55.

Research Problem. A study of the problems of formulating national policy both in developing countries and under-developed countries. (CRL)

133/. CHRISTIAN VALUES AND THE URBAN ETHOS

Main Investigator: Max Stackhouse.

Status of Research and Publications: In process.

Agency: Joint Center for Urban Studies of Massachusetts Institute of Technology and Harvard University.

Previous Digest Report: None.

Research Problem. To identify and examine the values that are built into selected aspects of urban life.

Method of Study. Research will focus on a comparative analysis of major concepts of the city (especially theological) and on the ethical and ecclesiastical implications of urbanization. (CRL)

134. THE CONGRUENCE OF URBAN FORM AND ACTIVITY

Main Investigator: Carl Steinitz.

Status of Research and Publications: In process.

Agency: Joint Center for Urban Studies of Massachusetts Institute of Technology and Harvard University.

Previous Digest Report: None.

Research Problem. Examination of the elements that influence the consistent and appropriate "fit" between physical form and activity. A by-product of the study will be a systematic survey of current activity and form in Boston. (CRL)

135. WORK PATTERNS OF ENTREPRENEURS AND MANAGERS IN LATIN AMERICAN CITIES

Main Investigator: Arthur Steinchcombe.

Agency: Joint Center for Urban Studies of Massachusetts Institute of Technology and Harvard University, under sponsorship of the Olivetti Foundation.

Previous Digest Report: None.

Research Problem. To measure and compare how hard middle class people work in different cultural settings.

Method of Study. Using intensive interviews as the source of data, a comparative study is being made of people working in the steel industry at the managerial level in cities of three Latin American countries, Chile, Venezuela and Argentina. (CRL)

136. UNCONTROLLED URBAN SETTLEMENT IN PERU: A CASE STUDY

Main Investigator: John Turner.

Status of Research and Publications: In process.

Agency: Joint Center for Urban Studies of Massachusetts Institute of Technology and Harvard University, under sponsorship of the Olivetti Foundation.

Previous Digest Report: None.

Research Problem. A case study of uncontrolled urban settlement in Peru, with reference to the same phenomenon in Latin America. The study will include a summary of the demographic and cultural aspects of urbanization, an evaluation of public housing and urban development policies and a discussion of criteria and norms for popular housing and urban development, as well as an analysis of the processes and characteristics of uncontrolled settlement between 1945 and 1965. (CRL)

137. THE PRESS IN CITY POLITICS

Main Investigator: Paul Weaver.

Status of Research and Publications: In process.

Agency: Joint Center for Urban Studies of Massachusetts Institute of Technology and Harvard University.

Previous Digest Report: None.

Research Problem. A study of how, why and with what effects newspapers in New York City participate in city politics and government. Attention will be given also to newspapers as organizations. (CRL)

138. PREPARATION OF A DEVELOPMENT PLAN FOR THE GUAYANA REGION OF VENEZUELA AND ITS PRINCIPAL CITY, CIUDAD GUAYANA

Main Investigators: James Q. Wilson and Lloyd Rodwin.

Status of Research and Publications: In process. Findings to date reported in Lloyd Rodwin, "Ciudad Guayana: A New City," Scientific American, September, 1965.

Agency: Joint Center for Urban Studies of Massachusetts Institute of Technology and Harvard University, under sponsorship of Corporacion Venezolana de Guayana.

Previous Digest Report: 11:2-60.

Research Problem. The project develops and coordinates techniques of regional and urban planning to guide the growth of underdeveloped economies generally. (CRL)

139. RELATIONSHIPS BETWEEN HEALTH SERVICE AND URBAN PLANNING

Main Investigator: Not reported.

Status of Research and Publications: In process.

Agency: Joint Center for Urban Studies of Massachusetts Institute of Technology and Harvard University, under sponsorship of U.S. Department of Health, Education and Welfare, Public Health Service.

Previous Digest Report: None.

Research Problem. Identification of existing and potential links between urban planning and the planning of health services. More comprehensive research proposals should result from a review of relevant literature and experience in the fields of health facilities planning, state and urban planning and, to a lesser extent, public administration. Although the literature has been examined before by trained students in each field, this is the first time the literature of health facilities planning has been surveyed by urban planners. Because one of the main links among these disciplines appears to be a common concern for demographic projects and their implications, considerable attention will be given to potential improvements in this field. This research should also lead to a report on current practice, the existing literature, and suggestions for introducing health factors into planning curricula. (HEW)

140. MECHANISM OF URBAN EXPANSION IN THE NEW TERRITORIES, HONG KONG

Main Investigator: Baruch Boxer.

Status of Research and Publications: Near completion. To be published as series of articles or as monograph.

Agency: Michigan State University, Department of Geography, with support from the Foreign Field Research Program, Division of Earth Sciences, National Academy of Sciences-National Research Council; Joint Committee on Contemporary China of the Social Science Research Council - American Council of Learned Societies; and the Indiana University Advisory Committee on International Studies.

Previous Digest Report: None.

Research Problem. (1) To test commonly held assumptions about the urban growth "process" in an analysis of the chronology and mechanism of a development situation requiring rapid absorption of Hakka Chinese villagers into a contemporary urban setting. To account for spatially-definable, land-based variations in the response of two agricultural villages to the requirements of a comprehensive government urban development plan. (2) To assess the role of feng-shui (geomancy) as a systematic theory of geographic location and to account for modifications in traditional feng-shui procedures in Tsuen Wan, N.T. villages as indicative of special adjustments to the locational demands of the development plan. (3) To study the origin and evolution of Crown Land policy in the New Territories since 1898, when the New Territories were obtained on lease from China, as this policy has come to govern the land exchanges, land resumptions and premium and compensation payments facilitating urban transformation.

Method of Study. Field interviewing; use of historical records and government documents; use of cartographic and computer laboratory facilities.

Major Findings. On a scale of lesser or greater propensity for change measured in terms of the chronology and relative weight of variable characteristics in the tenure, use, settlement characteristics and value of land, the following empirical considerations appear significant: whether single or multiple lineage village; prosperity of village (collectively or in terms of particular individuals); location relative to development categories defined by the comprehensive plan; the nature of village-government relations (i.e. level of "cooperation"); extent and relative importance (economically and politically) of extra-village formal associations; susceptibility to property alienations. (BB)

141. A MODEL POLICE TRAINING PLAN FOR URBAN COMPLEXES

Main Investigator: Bruce Olson.

Status of Research and Publications: In process. Report for general distribution expected by June 1, 1966.

Agency: Michigan State University, School of Police Administration and Public Safety in cooperation with the International Association of Chiefs of Police, for the Metropolitan Fund, Inc., of Detroit.

Previous Digest Report: None.

Research Problem. To inventory the police training resources in the six-county region surrounding Detroit, evaluate these resources and suggest ways in which law enforcement training and education might be strengthened..

Method of Study. Interviews with law enforcement executives in the region; analyses of existing police curricula, documents and records related to training; questionnaires to all police agencies in the region to gather data concerning the extent to which officers have been trained, existing facilities and ways in which they are funded and organized. (BO)

142. INVOLVEMENT OF TOP DECISION-MAKERS AS AN INSTRUMENT TO PROMOTE CHANGE IN THE ORGANIZATION AND FINANCING OF COMMUNITY HEALTH SERVICES

Main Investigator: Vlado A. Getting.

Status of Research and Publications: In process. Quarterly progress reports available from Michigan Community Health Services Study, 122 S. First Street, Ann Arbor, Michigan 48108.

Agency: University of Michigan, School of Public Health, Department of Community Services (Ann Arbor), in cooperation with Michigan Health Officers Association and Michigan Department of Public Health, with support from W. K. Kellogg Foundation and the U. S. Public Health Service.

Previous Digest Report: None.

Research Problem. A demonstration project to test the extent to which systematic involvement of top decision-makers in the constructive analysis of problems of public health organization and finance will (1) lead to positive action on their part to change the system for the better and (2) result in actual and significant modification of the current pattern of operations. The ultimate goal, in conjunction with other activities, is to improve the status of organization and finance of community health services in Michigan.

Method Of Study. Recruit influential decision-makers at the county and state level to comprise Task Forces for the six regions selected for study, and the Committee of Forty for Health to serve as interested and discerning individuals, recognized and accepted as leaders, who will bring to the project a variety of relevant skills and backgrounds. Membership of Committee of Forty to be composed of leaders identified within the six Task Forces and those persons selected because of their outstanding leadership roles in the state. The six regions were drawn on the basis of economic status, trade area, travel patterns, local mores, voluntary health association boundaries and what may be called "natural affinities." The Committee of Forty will integrate the findings and suggestions of the Task Forces and work out compromises necessary for statewide legislative and administrative proposals. Members of the Committee of Sponsors will act as advisors and consultants.

Data helpful in identifying sources of difficulty in the organization and financing of community health services in the present and future will be collected, including technical, legal, social, economic and demographic information regarding history, present status and projected future trends. The Task Forces will travel to areas of the state and meet formally with community leaders.

The project's second stage will be a process of stimulating interest in these goals at the state level and in as many local areas as possible. (ADZ)

143. PATTERNS OF PUBLIC EXPENDITURE IN SMALL TOWNS IN RELATION TO PROPERTY TAX BASE

Main Investigators: Philip M. Raup and Dean Tin Chen.

Status of Research and Publications: Completion expected June, 1966.

Agency: University of Minnesota, Agricultural Experiment Station.

Previous Digest Report: None.

Research Problem: Survey expenditure patterns in ninety towns (all incorporated) in eleven counties in southwestern Minnesota to determine the relationships between town size, tax burden and per capita expenditures. (GT)

144. THE ECONOMIC IMPACT OF INTERSTATE HIGHWAYS ON BYPASSED TOWNS

Main Investigator: Donald R. Wells.

Status of Research and Publications: In process.

Agency: University of Mississippi, Department of Research in Business and Government.

Previous Digest Report: None.

Research Problem. Determine how bypassed businesses adjust to lost traffic. Ascertain what makes them successful in spite of this loss and what causes them to fail. (GT)

145 GUIDE TO CAPITAL IMPROVEMENTS PROGRAMMING FOR OFFICIALS AND CITIZEN LEADERS IN SMALLER CITIES AND COUNTIES

Main Investigator: Andrew A. Bullis.

Status of Research and Publications: In process.

Agency: National League of Cities (Washington, D.C.), under sponsorship of Department of Housing and Urban Development.

Previous Digest Report: None.

Research Problem. Prepare a guide to suggest ways that are more advantageous to taxpayers, elected officials and administrators, of carrying on public works in the smaller community to help achieve the best allocation of the community's resources and to prepare itself for expected or desired changes in the future. (HR)

146. METROPOLITAN ECONOMIC PROJECTION SERIES

Main Investigators: Sidney Sonenblum and Joe Won Lee.

Status of Research and Publications: Second publication, The Economies of Fifteen Metropolitan Areas: Historical and Projected Employment, Output, Population and Personal Income, 1950, 1957, 1960, 1962 and 1975, issued November, 1965. Completion of third publication, Economic and Demographic Projections for Eighty-two Metropolitan Areas: Report No. 66-R-1, expected May, 1966. Publications available to subscribers of the Regional Economic Projection Series.

Agency: National Planning Association.

Previous Digest Reports: 10:2-57; 11:1-56; 11:2-72; 12:1-75; 12:2-65.
(JWL)

147. REGIONAL ECONOMIC PROJECTION SERIES

Main Investigators: Sidney Sonenblum and Ahmad Al-Samarrie.

Status of Research and Publications: Last of five publications completed, State Projections to 1975: A Quantitative Analysis of Economic and Demographic Changes, REPS Report No. 65-11, issued October, 1965.

Agency: National Planning Association.

Previous Digest Report: 9:2-87; 10:1-48; 10:2-59; 11:1-57; 11:2-73;
12:1-76; 12:2-64.

Major Findings. A significant redistribution of economic activity toward the Far West, Rocky Mountains and the Southwest is expected over the next decade. Most of the states in these regions are projected to have a relatively rapid employment growth. These areas enjoy both favorable industrial structures and above average employment growth in every industry except agriculture. Population and labor force are also projected to grow rapidly, particularly in Nevada, Arizona, Alaska, Hawaii, California, New Mexico, Colorado and Utah.

The Plains states, in contrast, are projected to have a relatively poor employment growth due to both an unfavorable industrial structure (the result of heavy dependence upon agriculture and other slow-growing or declining resource-based industries) and below aver-

age employment growth rates in individual industries.

As in the past, there will be a geographic redistribution of employment away from the New England, Middle Atlantic and the Great Lakes States. Despite this, these regions will continue to have the largest concentration of population, employment, income and wealth in the nation.

Despite the strong competitive advantages of the Southeast in almost all lines of industries (the result, perhaps, of relatively low wages and above-average increase in productivity) the prospect for total employment growth will continue to be relatively unfavorable. This is due, in part, to the region's above average specialization in agriculture, tobacco, textile and other resource-based industries. Personal income is projected to grow relatively rapidly, bringing the 1975 level of the region's per capita income closer to the national per capita personal income than that for 1965. (AAS)

148. METHOD FOR MEASUREMENT OF COMMUNITY DISLOCATION SENSITIVITY AND ADJUSTMENT POTENTIAL

Main Investigators: Sidney Sonenblum, Mannie Kupinsky, Peter Wagner and Lenora Howe.

Status of Research and Publications: In process. Completion expected by end of 1966.

Agency: National Planning Association, under sponsorship of U.S. Arms Control and Disarmament Agency.

Previous Digest Report: None.

Research Problem. Using eleven standard metropolitan statistical areas as examples, the study will attempt to select the most relevant economic indicators for measuring community sensitivity and adjustment potential in event of changes in defense expenditure levels. A key constraint is that the indicators be constructed from available and/or published data. (MK)

149. FINANCES OF THE CITY OF NEW YORK

Main Investigator:: Dick Netzer.

Status of Research and Publications: Research nearly complete. Final report scheduled for publication as a book in June, 1966.

Agency: New York University, Graduate School of Public Administration, under contract with the Temporary Commission on City Finances, City of New York.

Previous Digest Report: 11:2-75.

Research Problem. To make a fundamental study of the city's current and long-term fiscal needs and resources, including expenditure trends, intergovernmental fiscal relations, and the tax structure, with the objective of producing recommendations for basic policy changes, as well as illuminating existing problems.

Hypotheses: The dispersal of economic activity away from the large central cities, and their vulnerability to further dispersal, combines with the traditional concentration of the poor in the central cities to create the worst of their fiscal problems, problems which are likely to worsen over time.

Method of Study. The principal methods have been the conventional ones used in policy-oriented fiscal studies. The principal innovations were in connection with efforts to explore the locational effects of New York City tax differentials. Most successful was the first quantification of the effects of a sales tax on record, done by Henry M. Levin.

Major Findings. The city's future needs for revenues will be enormous. They call for large shifts of responsibility to the state, in part to moderate the locational effects of tax differentials. Beyond this, the city needs to utilize revenue devices which are locationally more or less neutral, notably a city income tax and much more reliance on user chargers. It needs to reform its damaging and unique business taxes, and to de-emphasize the property tax on housing. (DN)

150. ECONOMICS OF THE PROPERTY TAX IN THE UNITED STATES

Main Investigator: Dick Netzer.

Status of Research and Publications: Published under the above title January, 1966, by the Brookings Institution, 1775 Massachusetts Avenue, N.W., Washington, D. C. 20036. 326 pages. \$6.75 cloth, \$2.50 paper.

Agency: New York University, Graduate School of Public Administration, under sponsorship of the Brookings Institution.

Previous Digest Report: 10:2-60; 11:2-74. (JS)

151. MECHANISMS OF STATE GOVERNMENTS TO ASSIST LOCAL GOVERNMENTS

Main Investigator: Joseph F. Zimmerman.

Status of Research and Publications: In process. Completion expected January, 1967.

Agency: State University of New York, Graduate School of Public Affairs.

Previous Digest Report: None.

Research Problem. A study of the origin, development and effectiveness of the mechanisms established within the executive branch of state governments to assist local governments. (JFZ)

152. METROPOLITAN COUNCILS OF GOVERNMENT

Main Investigator: Joseph F. Zimmerman.

Status of Research and Publications: In process. Completion expected September, 1966.

Agency: State University of New York, Graduate School of Public Affairs.

Previous Digest Report: None.

Research Problem. A study of the origin, development, and effectiveness of metropolitan councils of government. (JFZ)

153. HOUSEHOLD ACTIVITY PATTERNS AND COMMUNITY HEALTH

Main Investigators: F. Stuart Chapin, Jr., Henry C. Hightower and John R. Hitchcock

Status of Research and Publications: In process. Journal article or monograph anticipated. Earlier experimental work reported in "Household Activity Patterns and Land Use," Journal of American Institute of Planners, August, 1965; Household Activity Systems-A Pilot Investigation, April, 1966. \$2.00.

Agency: University of North Carolina, Institute for Research in Social Science, Center for Urban and Regional Studies, under sponsorship of National Institute of Health.

Previous Digest Report: None.

Research Problem. Development of an approach to analysis of household activity patterns in metropolitan areas to aid in the establishment of guides for delivery of health services and the location of health facilities. The current stage of research is concerned with (1) the conceptual framework for activity analysis; (2) the design and testing of survey instruments for the study of household activities; and (3) the development of an approach for analysis of household utilization of medical care services and facilities in relation to household activity patterns.

Method of Study. Particular attention is given to the allocation of time by the head of the household or spouse (alternately) to various activities, and to the spatial distribution pattern of the out-of-home activities. Controlling for such factors as age, sex, income, stage in the life cycle, medical care, experience, possession of health insurance and attitudinal variables, utilization of medical care services

is being approached in terms of life styles as reflected in household activity patterns and in terms of various situational variables concerned with convenience, accessibility and time and motion spent in securing health services. (FSC,Jr.)

154. AMERICANS' HOME AND NEIGHBORHOOD PREFERENCES

Main Investigator: Not reported.

Status of Research and Publications: A two-year study in process.

Agency: University of North Carolina, Institute for Research in Social Science, Center for Urban and Regional Studies, under sponsorship of Highway Research Board.

Previous Digest Report: None

Research Problem. In order to help determine the future demands for highways and other transportation facilities, (1) to measure for a representative cross section of the population, the factors people value and the importance assigned them in selecting homes and neighborhoods and (2) to develop a mathematical model, incorporating these significant values and their relative weight, that can be used to determine individual preferences for type of home and neighborhood.

Method of Study. Conduct a national sampling survey of some 1,500 households in metropolitan areas. Survey will involve interviews equally divided between "heads of households" and "spouses of heads of households", and cover such factors as: background; place of residence and neighborhood; accessibility opportunities to work, stores, activity centers; livability/expectations and satisfactions. The residential model will then be designed as a location type and the results of the survey and their weights introduced as constraints on local choices or as locator variables. (HRB)

155. A MODEL FOR SIMULATING RESIDENTIAL GROWTH

Main Investigators: F. Stuart Chapin, Jr., Shirley F. Weiss, and Thomas G. Donnelly.

Status of Research and Publications: Completed and reported in Factors Influencing Land Development, August, 1962, \$3.00; A Probabilistic Model for Residential Growth, May, 1964, \$2.00; and Some Input Refinements for a Residential Model, July, 1965, \$2.00. All published in the Urban Studies Research Monograph Series, Center for Urban and Regional Studies, Institute for Research in Social Science, University of North Carolina, Chapel Hill, North Carolina.

Agency: University of North Carolina, Institute for Research in Social Science, Center for Urban and Regional Studies, in cooperation with U. S. Bureau of Public Roads.

Previous Digest Reports: 9:2-95; 11:2-77.

Research Problem. To develop a model for simulating the distribution of residential growth beyond the developed areas of a city. In the first report, a wide range of growth factors are evaluated by regression analysis and the outlines of a model presented. The second report describes the use of this analysis of growth factors in a prototype model involving Monte Carlo techniques of simulation, outlines the basic computer program developed for early tests, and presents the results of first tests. The third and final report in this series presents some refinements differentiating between raw land and developed land in the distribution of development, reports on results of this revised version of the model, and outlines directions for further work on land use models. This completed unit of work is now being extended in the design of a second generation set of models in which the residential growth process is subaggregated into producer and consumer models. See Item 156 below. (FSC,Jr.)

156. ENVIRONMENTAL ENGINEERING POLICIES AND URBAN DEVELOPMENT

Main Investigators: Shirley F. Weiss, Edward J. Kaiser, Kenneth B. Kenney, John E. Smith, L. Earl Armiger, Jr., and Thomas G. Donnelly.

Status of Research and Publications: In process. Completion expected August, 1969. Findings to date reported in Shirley F. Weiss, John E. Smith, Edward J. Kaiser and Kenneth B. Kenney, Residential Developer Decisions: A Focused View of the Urban Growth Process, April, 1966, Urban Studies Research Monograph Series, Center for Urban and Regional Studies, Institute for Research in Social Science, University of North Carolina, Chapel Hill, North Carolina. \$2.00. Shirley F. Weiss and Thomas G. Donnelly, "Application of Short-Range Residential Growth Forecasts for Testing Public Policy Alternatives," Traffic Quarterly, July, 1966. Shirley F. Weiss, Thomas G. Donnelly and Edward J. Kaiser, "Land Value and Land Development Influence Factors; An Analytical Approach for Examining Policy Alternatives," Land Economics, May, 1966. Shirley F. Weiss, Kenneth B. Kenney and Roger C. Steffens, "Consumer Preferences in Residential Location: A Preliminary Investigation of the Home Purchase Decision," Research Previews, April, 1966, pp. 1-32. Edward J. Kaiser, "Locational Decision Factors in a Producer Model of Residential Development," paper presented at the Regional Science Association Meeting, held in Philadelphia, November 12-14, 1965. Recent working papers are, John E. Smith, "The Locational Decision Process of Residential Land Developers: Toward an Empirical Method," July 21, 1965; Kenneth B. Kenney, "Pre-Development Land Ownership Factors and Their Influence On Residential Development," September 21, 1965; and John E. Smith, "Landowner Characteristics as a Concern in Current Planning Practice: A Summary of a National Survey of Planning Directors," March 21, 1966.

Agency: University of North Carolina, Institute for Research in Social Science, Center for Urban and Regional Studies, under sponsorship of U. S. Public Health Service.

Previous Digest Report: 12:2-70. "Developer Decisions: Formulation of a Producer Submodel to Forecast Residential Growth," reported in 12:1-83, now incorporated into this project.

Research Problem: To perfect a system of models which will have operational utility in evaluating public policies for land development.

Method of Study. (1) Develop a residential forecast model for testing the impact of key environmental engineering policies on long-term patterns of urban growth. (2) Develop "producer" submodels for testing the short-term and long-term impact of these policies on the locational decisions of land developers, builders and financiers. (3) Develop parallel "consumer" submodels for testing the short-term and long-term impact of these policies on the locational decisions of home owners, first-time buyers and renters. (4) Explore the specificity or universality of the impact of environmental engineering policies on urban growth patterns by comparative testing of another urban area of similar size and composition (200,000 population level) and of successively larger urban areas (for example, 500,000 and 1,000,000 population levels). (5) Contribute to the resources of the Center's urban data bank by continuing periodic surveys of conversions to urban land use in the test area and of concurrent changes in environmental engineering policies and other priming decisions. (6) Formulate a series of tests for evaluating alternative environmental engineering policies according to their impact on the direction and intensity of urban growth and related living patterns. (SFW)

157. PATTERNS OF CONSENSUS AND CONFLICT: A STUDY OF THE POLITICAL ORIENTATIONS OF THE POOR

Main Investigators: Lewis Lipsitz and David Tabb.

Status of Research and Publications: In process. Completion of interviewing expected by July, 1966. Final report scheduled for May, 1967.

Agency: University of North Carolina, Department of Political Science, under sponsorship of the Social Science Research Council.

Previous Digest Report: None.

Research Problem. To understand the political motivations of the poor. In an age of anti-poverty programs, knowledge about the causes and consequences of lower class political attitudes and behavior seems crucial to the success of any effort to educate the poor in democratic ways of life.

This study explores five areas: (1) perceptions and feelings about freedom of expression, majority rule, governmental legitimacy, political and social equality and procedural due process. (2) Dimensions of powerlessness and normlessness. Primary emphasis will be given to the gap between the expectations of the poor and their experiences with politics. (3) Experiences these individuals have had with politics and the origins of their political passivity. (4) The manner in which men cope with their status. Are the poor satisfied with their status or do they experience conflict, withdrawal or rebellion as a result of their perceptions about status? (5) Attitudes toward authority, patterns of deference and child rearing habits as they relate to the political satisfactions and displeasures of the poor.

Method of Study. A sample of 100 poor white males, 50 poor Negro males and 50 middle class males will be drawn from a stratified-random sample of 800 individuals questioned by the North Carolina Fund in Durham, North Carolina. Both open-ended questions and stories as well as close-ended scales will be used to assess the political orientations of the sample. Several non-parametric tests (correlational and analysis of variance programs) will aid in the final analysis of the data. (LL and DT)

158. THE WALLS OF ACRE: A STUDY IN URBAN ANTHROPOLOGY

Main Investigator: Mortin Rubin.

Status of Research and Publications: Completed. To be published.

Agency: Northeastern University (Boston), under sponsorship of Social Science Research Council, Middle East Committee.

Previous Digest Report: None.

Research Problem: A case study of Acre, a once-famous place in transition from folk-ethnic to industrial ways, absorbing large numbers of refugees from East and West, and serving as a testing ground for Arab-Jewish living and working together in an atmosphere otherwise charged with international hostility. (MR)

159. THE LOCAL EXPERT AS A CONFLICT MANAGER IN MUNICIPAL AND EDUCATIONAL GOVERNMENT

Main Investigator: R. J. Snow.

Status of Research and Publications: In process. Completion expected June, 1966.

Agency: Northwestern University, Center for Metropolitan Studies, under sponsorship of Social Science Research Council. Designed and preliminary data collected under grant from U.S. Office of Education, Professor David W. Minor, Main Investigator.

Previous Digest Report: None.

Research Problem. A comparison of roles of city and village managers and elementary school superintendents across community settings which vary in their socio-economic and conflict characteristics, focusing on conflict as a variable with social roots and institutional consequences.

Previous Relevant Research. Neal Gross, et.al., Explorations in Role Analysis (New York: Wiley and Sons, 1958); Robert S. Cahill and Stephen P. Hencley (eds.), The Politics of Education in the Local Community (Danville, Illinois: Interstate Printers and Publishers, Inc., 1964); David W. Minar, The Community Basis of Conflict in School System Politics, Northwestern University Department of Political Science, 1965; David W. Minar, "Educational Decision-Making in Suburban Communities: School Board and Community Linkages," paper presented at convention of the American Educational Research Association, Chicago, Illinois, February 12, 1965.

Hypotheses. (1) The higher a community falls on a dimension of social rank, the lower will be its conflict potential (because of the presence of conflict management skills and economic resources). (2) The lower the conflict, the greater will be the reliance upon experts, as opposed to holders of rank authority positions. (3) Reliance on administrative expertise will be manifest in longer tenure, higher salary, more institutionalized procedures of staff selection, more bureaucratic development, and greater ease in working relationships between experts and staffs on the one hand and policy bodies as community representatives on the other. (4) Certain differences will manifest themselves between municipal and educational politics within communities due to differential value statuses and resultant development of conflict management mechanisms.

Method of Study. Analysis of newspapers over a five year period in the four communities; interviews with superintendents, managers, policy body members and influential people in the community; analysis of electoral data for a ten year period from both politics; observation of public meetings of the policy bodies.

Major Findings. Ideal democratic processes of tension release and the compromise of interest clashes through functional electoral conflict are subverted in high resource communities where consensus and conflict-free life-styles are highly valued. Such systems are not characterized by great citizen involvement or overt expression of interest in local decision processes. Social decisions which in other systems are made at the ballot box are often entrusted to small "caretaker" groups which perform the functions of selection and recruitment to authority positions. Also perceived as "caretakers," those informal authority positions have wide latitude granted them, and they in turn grant wide latitude to professional experts, as long as the latter can control social, ideological, economic or political issues within acceptable bounds of quietude. In other systems the institutions of democratic choice operate with more realism and vigor. Such systems, however,

because of the absence of conflict management skills, attitudes and resources, sometimes become so conflict ridden as to provide environments incompatible with the effective operation of expertise systems. Such communities are those low on the social rank scale. Political requirements placed by such systems upon holders of formal authority do not allow them to defer to administrative experts to the same degree as in low conflict systems. Leadership skills, however, emerge as important determinants of individual success or failure in effective fulfillment of roles of expertise. Agility in the use of administrative techniques and personality characteristics are seen to overcome the pressures of conflict in certain systems. (RJS)

160. CRITERIA FOR EVALUATING ALTERNATIVE TRANSPORTATION PLANS

Main Investigators: Edwin N. Thomas and Joseph L. Schofer.

Status of Research and Publications: In process.

Agency: Northwestern University, Transportation Center, under sponsorship of Highway Research Board.

Previous Digest Report: None.

Research Problem. To identify and evaluate the broad array of factors reflecting the users' and communities' scale of values that should be considered in making an intelligent choice among alternative transportation plans. A system for using these factors will be devised to supplement the traditional benefit-cost analysis.

Method of Study. A detailed conceptual model of the transportation system is being developed to provide a framework within which to better understand the functions, operations and performance of that system. This model is expected to delineate clearly the nature of the goals, inputs, elements, resource and information flows, outputs and boundaries of the generalized transportation system. It will provide the basis for outlining the areas in which goals, modeling capabilities, information and evaluating criteria must be provided.

The system model will aid in the formulation of a set of strategies for evaluating alternative transportation plans. These strategies are expected to define methods for structuring a logical information package within which the various criteria, costs and the effectiveness and efficiency with which an alternative plan meets its objectives may be presented to the decision makers.

The relationship between system consequences, goals and evaluating criteria will be investigated through the use of the conceptual model. Sets of generalized criteria will be derived and the nature of system goals explored. Problems of measurement will be studied and solutions offered where possible. Evaluation strategies will be modified to account for situations in which certain system consequences are not measurable.

In an effort to better understand the perception of the transportation system by community residents and system users, a home interview survey was conducted. The data from this survey, currently being analyzed, are expected to provide a general indication of the transportation views and needs of urban residents. In addition, this phase of the research should result in a methodology for determining public opinion concerning transportation in any urban area. (JLS)

161. NON-RESIDENTIAL TRIP GENERATION ANALYSIS, PHASE II

Main Investigator: Not reported.

Status of Research and Publications: Phase I completed and findings published as report. A limited number of copies available from Transportation Center, Northwestern University. Phase II in process.

Agency: Northwestern University, Transportation Center, under sponsorship of U.S. Bureau of Public Roads.

Previous Digest Report: 11:2-80.

Research Problem. Based on findings from Phase I, an intensive analysis of selected problems is being conducted. Topics include: comparisons of various systems of land use classification, and analyses of trip sets and of non-residential activity linkages. (WLG)

162. DIFFERENTIAL TAXATION AND INTERMODAL COMPETITION

Main Investigator: Not reported.

Status of Research and Publications: In process. Findings to date to be reported in "Demand and Supply in Freight Transportation," in a forthcoming issue of Journal of Industrial Economics.

Agency: Northwestern University, Transportation Center, under sponsorship of the Southern Railway System.

Previous Digest Report: None.

Research Problem. Investigate the extent and impact of differential taxation - local, state and federal - upon resource allocation in transportation. In areas where differential taxation is found to be present, its competitive implications for the various modes will be assessed. (WLG)

163. ANALYSIS OF CURRENT RESEARCH AND DEVELOPMENT IN URBAN TRANSPORTATION

Main Investigator: Not reported.

Status of Research and Publications: In process.

Agency: Northwestern University, Transportation Center, under sponsorship of the Engineering Foundation.

Previous Digest Report: None.

Research Problem. (1) Develop a conceptual framework for the appraisal of urban transportation research. (2) Provide a comprehensive annotated bibliography of urban transportation research. Results will be used to establish a continuing program for reviewing and evaluating research on urban transportation. (WLG)

164. ALTERNATIVE FORMS OF TRANSPORTATION REGULATION: THEIR ECONOMIC CONSEQUENCES

Main Investigator: Not reported.

Status of Research and Publications: In process.

Agency: Northwestern University, Transportation Center, under sponsorship of the Transportation Research Foundation.

Previous Digest Report: None.

Research Problem. To investigate the economic impact of various methods of regulating transportation industries. The study presupposes that the primary objective of regulating transportation firms is to improve the allocation of resources by the supplier of transportation services, by the user of these services and by the economy as a whole, while providing equitable treatment for all participants. This study will analyze the effects of adopting various types of regulatory practices. (WLG)

165. TRANSPORTATION AND THE ECONOMIC STRUCTURE OF AN URBAN AREA

Main Investigator: Not reported.

Status of Research and Publications: In process.

Agency: Northwestern University, Transportation Center, under sponsorship of U.S. Bureau of Public Roads.

Previous Digest Report: None.

Research Problem. To develop a theory explaining the changing distribution of economic activity in large metropolitan areas, and to analyze problems of consumer choice in urban transportation mode. (WLG)

166. FRIGID REGION SETTLEMENTS: A STUDY OF TWO NEW TOWNS IN THE CANADIAN NORTH

Main Investigator: Laurence C. Gerckens.

Status of Research and Publications: In process. Report to be completed October, 1966.

Agency: Ohio State University, Department of City and Regional Planning.

Previous Digest Report: None.

Research Problem. A general report on settlements in the frigid regions of the world with major emphasis on the characteristics of Yellowknife and Inuvik, N.W.T., Canada, including detailed information on their sites, physical structure, development considerations, construction and maintenance costs, utility systems, housing structure and general environmental qualities. Report will conclude with a critical analysis of the urban planning and design values, criteria and systems that shaped these new towns. (LCG)

167 . HOME VALUES IN A COMMUNITY DESIGNED FOR THE PEDESTRIAN

Main Investigator: W. Raymond Mills.

Status of Research and Publications: Data collection completed. Report to be issued by June 1, 1966

Agency: Ohio State University, Department of City and Regional Planning.

Previous Digest Report: None.

Research Problem. To test the hypothesis that home values are higher in communities designed to encourage walking.

Method of Study. Greenhills, Ohio, one of the 1930's Greenbelt Towns built by the federal government, is being studied along with control communities located near Greenhills. A total of 506 sales records, based on tax stamps and records of the Cincinnati Multiple Listing Service, are being examined. (WRM)

68 THE IMPACT OF AGRICULTURAL RESOURCE ADJUSTMENTS ON THE ECONOMY OF SOUTHWEST OKLAHOMA

Main Investigators: Carl E. Olson and Odell L. Walker.

Status of Research and Publications: Doctoral dissertation. Research completed. To be published as a technical bulletin by Oklahoma State University.

Agency: Oklahoma State University, Department of Agricultural Economics (Stillwater), with support from Resources for the Future, Inc.

Previous Digest Report: None.

Research Problem. How the non-agricultural sector of the economy would be affected by a reduction of human resources in the agricultural sector. Earlier studies conducted in southwestern Oklahoma show an

excess of human resources in agriculture. From 30 to 70 percent of the present agricultural labor force needs to adjust out of the industry to allow the human resources remaining to have a labor income somewhat comparable to non-agricultural employment.

Previous Relevant Research. Walker and Tweeten, "Estimating Socio-economic Effects of a Declining Farm Population in a Sparse Area," Regional Development Analysis, Oklahoma State University, 1963.

Method of Study. A model describing the economic interdependence of the agricultural and non-agricultural sectors was developed. The interdependence model consists of five equations which describe how employment, population, consumption, expenditures and personal incomes are functionally related. By introducing changes in economic activity caused by the projected agricultural resource adjustments into the model, changes in total economic activity are estimated as well as changes in the various sub-sectors of the non-agricultural sector. The interdependence coefficients are obtained by linear regression and point estimation. The initial impact of the projected adjustments is estimated with a basic employment multiplier derived from an economic base analysis of the area.

Major Findings. The projected 42 percent reduction in the agricultural labor force reduced non-agricultural employment by 19 percent, total consumption expenditures by 20 percent and total personal income by 12 percent. These reductions indicate that serious resource use adjustments will be needed in the non-agricultural sector of the economy for that sector to achieve efficient resource use. (CEO AND OLW)

169. COMPUTER SIMULATION OF ORGANIZATION STRUCTURES

Main Investigator: Max D. Richards.

Status of Research and Publications: In process.

Agency: Pennsylvania State University.

Previous Digest Report: None.

Research Problem. To examine the relative impact of input changes upon system performance for different organization structures.

Method of Study. A flexible model of a technological task has been developed so as to be able to control the nature of system inputs by experimental definition of the kind of task to be performed. Depending upon the kind of task, it is routed through the system in a way unique to the item being processed. Learning rates, skill levels, system decision rules for priority, personnel variables, process capacity, management system and organization structure can be varied to simulate a wide range of operating systems differentially influenced by input tasks. A series of tape-central processor IBM 7074 computer programs constitute the system for representing these variables. (MDR)

170. THE NEGRO IN MASS SOCIETY

Main Investigator: Seymour Leventman.

Status of Research and Publications: Data collection nearly complete. To be published as research monograph in 1967 under above title.

Agency: University of Pennsylvania, Department of Sociology, with support from Social Science Research Council.

Previous Digest Report: None.

Research Problem. Assuming that integration of the Negro into American society will be accompanied by the disintegration of the Negro community, the study investigates the changing structure of the Negro community of Philadelphia and examines two class levels within it, each representing a different stage of integration into the general society. Integration here presupposes achievement of social mobility, which in turn depends upon insight into how society functions and what is required to "get ahead" within it.

Previous Relevant Research. Seymour Leventman and Judith R. Kramer, Children of the Gilded Ghetto, which focuses on that structural complex which is frequently overlooked but which exerts a powerful influence on minority group behavior, the structure of the minority community itself.

Hypotheses. The higher class level (measured by income and occupation), the greater the access to the values and experiences of mass society (measured by such variables as organizational and friendship patterns, family and religious patterns, values and aspirations, life styles and racial and social identity).

Method of Study. Predicted relationships tested in a questionnaire personally administered to a sample of 500 Philadelphia Negroes, 250 drawn from a lower class neighborhood and 250 from a middle class one. Data derived from interviews with community leaders, workers and "crucially located" informants are also used. (SL)

171. DESIGN OF CITIES

Main Investigator: Edmund N. Bacon.

Status of Research and Publications: In process.

Agency: University of Pennsylvania, Institute for Environmental Studies, under sponsorship of Rockefeller Foundation.

Previous Digest Report: None.

Research Problem. Analysis of principles of urban design as demonstrated in the growth and development of a number of cities through history from Classical Athens to the present and application of these principles to contemporary urban design. (ENB)

172. EVALUATION OF RECREATION BENEFITS ASSOCIATED WITH WATER QUALITY OF THE DELAWARE ESTUARY.

Main Investigators: Anthony R. Tomazinis and Iskandar Gabbour.

Status of Research and Publications: In process. Results to be used in a broader study being undertaken by the DECS which involves a linear programming approach. Its objective is to choose from among a set of alternatives, the most satisfactory plan for the improvement of the water quality of the Delaware Estuary in terms of the level and location of improvements.

Agency: University of Pennsylvania, Institute for Environmental Studies, under sponsorship of U.S. Public Health Service.

Previous Digest Report: None.

Research Problem. A quantitative description of the existing and projected recreation demand and associated monetary benefits for each of several water quality levels of the Delaware Estuary.

Previous Relevant Research. Paul Davidson, F. Gerard Adams, and Joseph Seneca, "The Social Value of Water Recreation Facilities Resulting From an Improvement in Water Quality in an Estuary: The Delaware - A Case," Western Resources Papers, 1965, University of Colorado Press. (See Digest 12:2-78.)

Method of Study. Benefits to be derived from and based on estimates of existing and future demands for water-oriented recreation activities in the study area. Individual demand estimates are to be developed for each of several levels of future water quality to be specified by the Delaware Estuary Comprehensive Study (DECS). For each level, the potential monetary benefits are to be estimated by the expected type of recreation activity. (ART)

173. DEGRADED HARDWOOD FORESTS

Main Investigator: Nicholas Muhlenberg.

Status of Research and Publications: A three-year project in process. Completion expected in 1966.

Agency: University of Pennsylvania, Institute for Environmental Studies, under sponsorship of Resources for the Future, Inc.

Previous Digest Report: None.

Research Problem. An investigation into the current status and possible future uses of the forested spaces of the eastern megalopolis.
(NM)

174. RELOCATION OF ELDERLY PERSONS

Main Investigator: Wallace Smith.

Status of Research and Publications: In process.

Agency: University of Pennsylvania, Institute for Environmental Studies in cooperation with San Francisco Council of Churches, under sponsorship of the Ford Foundation.

Previous Digest Report: None.

Research Problem. To determine the efficacy of using church-related volunteers, under supervision of a trained social worker, to aid elderly relocatees. Study will explore the particular problems and their solutions of three special groups of elderly persons: (1) Individuals who have managed their affairs more or less satisfactorily in their existing residences, but who encounter enormous psychological difficulties when they are compelled to move. (2) Individuals who are at present encountering adaptational difficulties and are functioning in an unacceptable manner. (3) Individuals so disturbed that they may require hospitalization. Volunteer workers receive intensive training in relocation, in the psychological and other needs of the elderly and in either visiting techniques or techniques in group activity. (HR)

175. ACCOUNT SYSTEM FOR DECISION EXERCISES IN URBAN AFFAIRS

Main Investigators: Frank Hendricks, Clark Rogers, Edward Foster and George Duggar.

Status of Research and Publications: In process. First phase reported at American Institute of Planners meeting at St. Louis, October, 1965. Reports on other phases under preparation.

Agency: University of Pittsburgh, Graduate School of Public and International Affairs, Urban Affairs Department.

Previous Digest Report: None.

Research Problem. Use of account systems in developing and using decision exercises in urban affairs.

Method of Study. The exercises utilize both off-line (role playing) and on-line (computer calculation) operations. The computer calculates changes in social accounts for the Pittsburgh region. Students' input into these accounts simulate the decisions of urban public administrators. Seventeen major accounts, representing social and physical development, interact in a system which introduces some of the

complexities of the interrelationships of the urban community. The management planning game will be used as an analytic tool to aid in understanding complex urban interactions. (GSD)

176. FISCAL PLANNING FOR AN URBAN COMMUNITY

Main Investigators: Neil C. Blanton and Edward W. Hanten.

Status of Research and Publications: Completed. Report issued under this title November, 1965, for general distribution. 100 pages. Further research contemplated.

Agency: Urban Redevelopment Authority of Pittsburgh and Redevelopment Authority of Allegheny County in cooperation with Pennsylvania Economy League, Inc., under sponsorship of Department of Housing and Urban Development, Urban Renewal Administration and A. W. Mellon Educational and Charitable Trust.

Previous Digest Report: None.

Research Problem. A study of public finance in the regional community of Pittsburgh and Allegheny County, the urban base of Western Pennsylvania. It attempts to (1) develop insight into the complexities and subtleties of various forces, and the magnitude of problems and needs; (2) show how rapidly the public sector is growing and the relative growth of various programs; (3) project revenue and spending trends for a five-year period; (4) provide a basis of essential information for the development of area-wide fiscal planning policies and methods; (5) suggest a mechanism for broadening public understanding of the community's fiscal situation, assessing public desires, reviewing and evaluating public programs and projects in their relation to each other and to the whole.

Method of Study. Data in four classifications were assembled, identified and analyzed. (1) Revenue and expenditure trends for all Allegheny County governmental and nongovernmental agencies administering public service programs supported, controlled and directed locally. (2) Fiscal data by type of decision-making unit. This relates to the differences in structure and operation between Allegheny County's 129 municipal governments, 109 school districts, 131 public authorities and 210 major private community agencies. (3) Urban environmental data as related to respective decision-making units. The purpose is to place in proper perspective the effect population, size, wealth, density, age, education and other impersonal factors play in the shaping of public budgets. (4) Expenditures by type of function, (a) community-oriented municipal functions, financed by tax revenues; (b) client-oriented services, supported by a combination of governmental and private efforts and funds; (c) developmental activities (planning and redevelopment included) supported by both governmental and private resources; (d) plant investment, representing capital expenditures and debt service affecting practically all public functional areas.

Major Findings. An overall community service deficit of nearly \$150 million by 1967 is predicted. The most critical budget problems are those affecting universities and colleges, the fastest growing field of community service in terms of financial requirements. Schools, hospitals, private agencies and local governmental units must take decisive steps soon to meet the mounting costs of serving the public. They need to act cooperatively and in relation to each other if they are to keep abreast of the expanding demands for more and better community services
(MS)

177. THE IMPACT OF NEW CONTRACEPTIVE METHODS IN IMPOVERISHED NEIGHBORHOODS OF NEW YORK

Main Investigator: Steven Polgar.

Status of Research and Publications: Completion expected in 1968. Findings to date reported by the investigator in "The Impact of New Contraceptive Methods in Impoverished Neighborhoods of New York-Rationale and Plan of Research," Annual Meeting of the Population Association of America, 1965; with Alan F. Guttmacher, "An Action-Research Project on Family Planning in 'Poverty' Neighborhoods of New York City," United Nations World Population Conference, Belgrade, August 30 to September 10, 1965.

Agency: Planned Parenthood, under partial sponsorship of NORC

Previous Digest Report: None.

Research Problem. To determine whether coitus-dependent birth control such as the oral pill and intrauterine contraceptive devices dispensed by a mobile service will lead to changes in family planning attitudes and behavior in slum neighborhoods where the traditional clinic-and-diaphragm approach has failed.

Method of Study. Twelve study neighborhoods are divided into six matched service-control pairs. Household surveys and record studies will be used. (SP)

178. CARIBBEAN TRADE - PAST AND FUTURE

Main Investigators: Fuat M. Andic and E. Gutierrez.

Status of Research and Publications: Completed. To be published in Caribbean Studies, Vol. VI, No. 2.

Agency: University of Puerto Rico, Institute of Caribbean Studies, under sponsorship of the Ford Foundation

Previous Digest Report: 12:2-93. (SA)

179. THE POLITICAL RELATIONSHIP BETWEEN THE FRENCH ANTILLES AND FRANCE, AND
THE NETHERLANDS ANTILLES-SURINAM WITH HOLLAND

Main Investigators: Thomas G. Mathews, Gerard Latortue, Fuat M. Andic
and Suphan Andic.

Status of Research and Publications: Completed and published under the
title Politics and Economics in the Caribbean - A Contemporary
Analysis of the Dutch, French and British Caribbean, by the
United States - Puerto Rico Commission on the status of Puerto
Rico. Available from the Institute of Caribbean Studies, Uni-
versidad de Puerto Rico, Rio Piedras, Puerto Rico. \$4.00 per
copy, \$3.00 to subscribers of Caribbean Studies.

Agency: University of Puerto Rico, Institute of Caribbean Studies, under
sponsorship of the Ford Foundation and the United States - Puerto
Rico Status Commission.

Previous Digest Report: 12:1-102; 12:2-92. (SA)

180. LOCATION FACTORS INFLUENCING THE ECONOMY OF THE PHILADELPHIA REGION

Main Investigators: Benjamin H. Stevens and Carolyn A. Brackett.

Status of Research and Publications: Completed. To be published in
1966 as Benjamin H. Stevens and Carolyn A. Brackett, Industrial
Location: A Review and Annotated Bibliography of Theoretical,
Empirical and Case Studies, Regional Science Research Institute
Bibliography Series, No. 3.

Agency: Regional Science Research Institute, under contract with Greater
Philadelphia Movement and in cooperation with Federal Reserve
Bank of Philadelphia.

Previous Digest Report: None.

Research Problem. (1) To identify and evaluate the importance
of various location factors to the location of specific economic activi-
ties, with particular reference to the Philadelphia Metropolitan Area.
(2) To evaluate the potential effects of local action on Philadelphia's
attractiveness in terms of the identified location factors.

Method of Study. (1) Systematic abstracting of location
theory, empirical studies of locational changes in specific industries
and industry groups, pertinent trade journal articles, and relevant re-
ports of persons, groups and agencies involved in industrial promotion
and economic development. (2) Analysis of the industrial structure of
the Philadelphia SMA emphasizing the growth trends, size distribution of
establishments, major location determinants and future potential of Phila-
delphia industries in comparison with the U. S. and the nine other largest
SMA's. (REC)

181. ALTERNATIVE POLLUTION CONTROL SYSTEMS FOR THE POTOMAC ESTUARY

Main Investigator: Robert K. Davis.

Status of Research and Publications: In process. Limited extension of study currently underway.

Agency: Resources for the Future, Inc.

Previous Digest Report: 12:2-10.

Research Problem. The current phase of the study is developing improved statistical estimates of the performance of alternative systems by extending the methods of synthetic or operational hydrology to include not only the hydrology of the system, but also the water temperature parameter and possibly the size of the waste load being produced. With this phase completed better evaluation of the desirability of systems scaled to different capacities or to different dissolved oxygen objectives should be possible. (RKD)

182. DESIGN FOR A WORLDWIDE STUDY OF REGIONAL DEVELOPMENT

Main Investigators: Resources for the Future Staff.

Status of Research and Publications: Completed. Published and distributed for RFF by The John Hopkins Press, Baltimore, Maryland 21218. 90 pages, paper, \$1.50.

Agency: Resources for the Future, Inc.

Previous Digest Report: None.

Research Problem. Developing countries are faced with severe economic and social problems stemming from the flood of migrants to already overcrowded cities, a deteriorating countryside, and city slums jammed with people untrained for industrial employment. Some countries are trying to cope with these problems through regional schemes that open up new opportunities and better patterns of human settlement. It has been proposed in the United Nations that the study of such efforts would be instructive for all developing countries.

In response to a request from the United Nations Secretariat, the staff of Resources for the Future prepared a plan for combined research and training in the field of regional development. The RFF report sets down the kinds of research and training activities that might be undertaken at regional centers throughout the world.

The report first outlines a general strategy for studying a series of regional development efforts. Succeeding chapters discuss in more detail the major features of the proposed field studies, dealing with questions of economic growth, settlement patterns, human resources and social development and political development broadly con-

ceived.. A final chapter presents a suggested procedure for organizing the proposed research-training program. (JS)

183. DETERMINANTS OF URBAN OVERHEAD INVESTMENT IN DEVELOPING COUNTRIES, WITH SPECIAL ATTENTION TO LATIN AMERICA

Main Investigator: Lowdon Wingo, Jr.

Status of Research and Publications: In process. A draft report expected fall of 1966.

Agency: Resources for the Future, Inc., in cooperation with the Latin American Institute of Social and Economic Planning, Santiago, Chile.

Previous Digest Report: None.

Research Problem. Latin America is experiencing some of the most rapid rates of urban population growth ever known, a good part of which is "development-induced." The rate of investment in urban infrastructure is partially determined by these growth volumes, but the linkage is loose and other factors become important in the volume of this class of investment. Since these investments compete with the investment requirements of "directly productive" activities and hence can influence rates of economic development, it becomes important to understand the processes which determine the scale and timing of investment in urban facilities in order to achieve a more optimal allocation of investment resources among these demands.

Method of Study. (1) The role of urban overhead investment decisions in national and regional economic planning is being studied through analysis of planning documents and supplementary information. (2) The inter-urban distribution of public facilities in Chile is being examined against the background of scale, industrial structure and rate of change variables during the period 1952-1960 to identify the major factors associated with differential endowments. (3) A decision model will be described focusing upon structural relationships which appear to be at work in the allocation of investment to urban overhead services. This will suggest essential characteristics of the planning processes which would provide for a more effective allocation of these investment flows. (LW)

184. ROLE OF CITIZEN PLANNING BOARDS IN MAJOR U.S. CITIES

Main Investigator: Howard H. Foster, Jr.

Status of Research and Publications: Completed. Publication plans pending.

Agency: University of Rhode Island.

Previous Digest Report: None.

Research Problem. To redefine the role of the citizen planning board as an aid to community planning efforts, as the role of urban planning in municipal government changes in responsibility and complexity.

Previous Relevant Research. Research by the investigator on the role of the regional planning agency in multi-town planning regions in Connecticut.

Hypothesis. That citizen planning boards in major U.S. cities under a strong political executive must represent the major community interests in development policy decisions and promote the acceptance of these policies through their influence on private decisions in the community.

Method of Study. Interview survey and data collection in sixteen U.S. cities of over 500,000 population. Data on planning board composition and activities analyzed according to criteria developed to support the hypothesis.

Major Findings. In general, planning boards in major cities have both the characteristics and involvement necessary for them to assume the role of representation and promotion in an effective manner. Some variation was found between cities in the study as to the degree that the hypothesis was verified. (HF)

185. A PREPARATORY STUDY ON THE SCHOOL INTEGRATION CONTROVERSIES IN NEW YORK CITY

Main Investigators: Bert E. Swanson and David Rogers.

Status of Research and Publications: Completed and published under the above title by the Institute for Community Studies, Sarah Lawrence College, Bronxville, New York. To be republished in April, 1966, under the title The Struggle for Equality, by Hobbs-Dorman, New York.

Agency: Sarah Lawrence College and New York University, under sponsorship of U.S. Office of Education.

Previous Digest Report: 11:2-109. (BES)

186 SOCIAL CHANGE: A FUNCTION OF COMMUNITY EDUCATION

Main Investigators: Herbert R. Sigurdson and Patricia A. Shanahan.

Status of Research and Publications: In process. Findings to date presented in three papers at the California State Psychological Association Convention, San Francisco, January, 1966: Patricia A. Shanahan, "The Emerging Adolescent: Youth As a Force in Urban Community Development"; Patricia A. Shanahan

and Herbert R. Sigurdson, "Social Attitudes, Values and Occupational Role"; and Herbert R. Sigurdson, "The Emerging Role of Youth in Community Development: A Challenge to Protocol."

Agency: University of Southern California, Youth Studies Center, under sponsorship of National Institute of Mental Health and Ford Foundation.

Previous Digest Report: None.

Research Problem. Mobilize and stimulate community residents to develop programs to reduce delinquency and youth problems in an ethnically and socio-economically integrated area of Los Angeles, California; study the effectiveness of the particular method used and changes in the distribution of services and youth problems across the community.

Method of Study. The method used was based upon several assumptions: (1) Youth-serving agencies tend to plan and operate their programs without reference to empirical social need and in isolation from one another. (2) Minimal community identification exists in large metropolitan centers which adds to the complexity of urban problems, reduces the ability of local residents to effect social and organizational change. (3) Local residents, youth and adult, have not been systematically engaged in the process of community study and program planning and implementation.

The strategy used to engage the Crenshaw Community in this project was based upon variations of a community study methodology developed earlier in a pilot demonstration in the city of Santa Monica, California: (1) Formal Community Study Seminars. (2) Community-Based Planning. On the basis of discussion and interpretation of the factual information presented in the study seminars, the participants plan programs designed to reduce the problems of youth. (3) Community-based responsibility for program implementation.

A questionnaire was administered to personnel in the participating organizations consisting of a semantic differential to measure attitudes and values, a series of questions about organizational variables, and questions about the causes and solutions of youth problems. During the final phase of the project, data will be collected from youth-serving, correction and enforcement agencies to determine changes in the distribution of youth problems and youth services. Interviews will be conducted with professionals familiar with the community to evaluate the effectiveness of the Crenshaw Project.

Major Findings. A number of locally organized and supported programs have been initiated by program participants. These include pre-school programs, a tutorial program and information methods such as a speakers bureau and a news report. In addition, local residents have formed a non-profit corporation which will continue the process of community education and program development. (PAS and HRS)

187. TECHNOLOGICAL UNEMPLOYMENT

Main Investigator: Not reported.

Status of Research and Publications: In process.

Agency: Southern Regional Council, Inc.

Previous Digest Report: None.

Research Problem. A long-term project concerned with technological unemployment resulting from automation. The first step, a basis for further research, is to determine more accurately than has been done heretofore, the true number of unemployed and the location and characteristics of these persons. (PA)

188. MANPOWER NEEDS FOR THE WAR ON POVERTY

Main Investigators: Herman Niebuhr and Eunice A. Clarke.

Status of Research and Publications: In process.

Agency: Temple University, Center for Community Studies, under sponsorship of U. S. Office of Economic Opportunity.

Previous Digest Report: None.

Research Problem. Determine the number and type of personnel needed in the human service fields (medical, welfare, legal, educative, etc.) in order to achieve the broad purposes of the Economic Opportunity Act of 1964. Identify the variables that affect the supply and demand of human services manpower and delineate alternative strategies for public action to achieve alternative public policy goals.

Method of Study. (1) Analyze current manpower needs for programs of the Office of Economic Opportunity, particularly the Community Action Programs. Review current training needs, resources and recommendations concerning immediate action to accomodate manpower needs. (2) Conduct an intermediate, but brief, investigation of national human services manpower needs, currently and in the near future. Identify and quantify the manpower gaps, if any, based upon explicit standards of service and upon training (or other production) assumptions. (3) Design a continuing, long range survey and analysis technique for the monitoring of human services manpower nationally. (HN,Jr.)

189. STATE AND LOCAL TAXATION OF PETROLEUM IN THE SOUTHWEST

Main Investigator: Charles Richey.

Status of Research and Publications: Doctoral dissertation in process.
Completion expected August, 1966.

Agency: University of Texas, under sponsorship of Resources for the Future, Inc.

Previous Digest Report: None.

Research Problem. To investigate severance and property tax effects on the petroleum producing industry. State and local taxation of petroleum production in the states of Texas, Louisiana, Oklahoma and New Mexico is relatively high with respect to costs of production, but the effects of such taxes on various production (and exploration) decisions has not been examined either theoretically or empirically. Given the control over prices exercised by state prorationing and the resulting inefficiency of crude oil and gas pricing, it is doubtful if production and property taxes have any consistent effect on production decisions in gross although they may affect certain decisions about low productivity (marginal or stripper) wells and about secondary recovery production schemes.

Hypotheses. (1) Because both severance and property taxes on petroleum production in the Southwest take the form of gross receipts taxes, their effect is to raise both the intensive and extensive cost margins for profitable production. (2) If the price per barrel of crude oil sold domestically were to decline, changes in the rate of severance taxation of production could become important in influencing rate of production (hence employment, income, etc.) and tax revenues.

Method of Study. Since many non-economic factors influence the pricing of crude oil, most of the conclusions reached will have to be based on analytical models. The existence of limited cost data permits inclusion of some stochastic changes in production and tax revenue with changes in price. (CR)

190. PROCESS OF POLITICAL MODERNIZATION IN THREE INDIAN COMMUNITIES IN GUATEMALA

Main Investigator: Roland H. Ebel.

Status of Research and Publications: In process. To be published as a monograph in 1967. Contemporary political processes in two communities reported in "Political Change in Guatemalan Indian Communities," Journal of Inter-American Studies, January, 1964, and with Oscar Horst, "Land and Politics in Rural Guatemala: A Study of a Highland Agricultural Community," The Community in Revolutionary Latin America, University of Kansas, Center of Latin American Studies, 1964.

Agency: Tulane University, Department of Political Science, under sponsorship of the Social Science Research Council.

Previous Digest Report: None.

Research Problem. A comparative study of the process of political modernization in three contiguous upland communities which manifest distinct differences in political organization and behavior. One has functioned for many decades without the traditional civil-religious hierarchy, while its neighbor has retained the hierarchy as an important religio-political institution. The third is known for its political radicalism.

This study has a three-fold focus: (1) Political changes over the past six decades in relation to the social and economic development of the region. (2) A description of the formal and informal patterns of behavior which characterize their decision-making processes. (3) An analysis of the capacity of each community to perform adequately functions necessary to the maintenance of a healthy political order.

Hypothesis. When traditionally organized communities (communities whose political order rests upon traditional values for the maintenance of legitimacy and where the interest articulating, interest aggregating and conflict mediating functions are performed by uniquely constituted and time honored institutions and practices) are forced to accept modern political institutions from a modernized national elite, they must find some way to integrate the traditional institutions with the modern if the transition is to be made without serious disruption of the decision-making process and the outbreak of anomic behavior.

Major Findings. Preliminary findings based on study of two of the three communities can be summarized as follows: (1) In communities where the historic decision-making process has been built around negotiation between individuals or among an ascriptively sanctioned elite, it is both difficult and dangerous to arbitrarily impose a political party system. Organized partisanship tends to polarize either around (a) loosely organized sets of individuals or (b) ritualistic rather than instrumental values. (2) Emergence of either "personalistic" or "ritualistic" partisanship (a) impedes formation of well-established interest groups built around the pursuit of instrumental values since the office holders are oriented either toward individual negotiations or toward ritualistic goals. (b) Produces a "politics of passion", with partisan organizations providing a vehicle by which differences regarding ritualistic values can be organized, giving rise to outbreaks of anomic behavior. (3) Traditional values and political processes have exercised a modifying effect upon the modern political practices imposed from above. However, where these traditional institutions have not remained visible and vital, the interest aggregation and conflict mediation functions have not been performed sufficiently well to dampen down violent political conflict. (RHE)

191. BUILDING CODE REFORM

Main Investigator: James Pickford.

Status of Research and Publications: Completed. Findings and recommendations published in Building Codes: A Program for Intergovernmental Reform, issued May, 1966 by the Advisory Commission on Inter-

governmental Relations, Washington, D.C. 20575. 103 pages.
Single copies available upon request.

Agency: The Advisory Commission on Intergovernmental Relations.

Previous Digest Report: None.

Research Problem. Building code modernization, uniformity and improved local administration to meet the nation's housing and commercial construction needs.

Major Findings. Obsolete code requirements, unnecessary diversity of such requirements among local jurisdictions and inadequate administration and enforcement, taken together, tend to place unjustified burdens on the technology and economics of building. There are 5,000 different local codes. This imposes burdens on the building industry that limit initiative and innovation in the development of new construction materials and techniques, result in excessive requirements adding to the cost of construction, narrow the market for such products and create conflicts whereby local inspection officials are responsible for both issuance and enforcement of codes. Further, the cost of research, testing, maintenance and servicing of the many building codes is increased.

The Commission's recommendations include the establishment of a national program for performance standards development for building construction and for a continuing national program for building construction research. The Commission urged that states and institutions of higher learning broaden their building research and information efforts in construction. The Commission also recommends preparation of a national model building code for permissive adoption by state and local governments; development of state model building codes for permissive adoption by local governments; and establishment of state-level construction review agencies to hear appeals from local governments on interpretation of building standards. Federal agencies are urged to adopt uniform standards for their construction program responsibilities. Finally, states are encouraged to adopt licensing programs for building inspectors, support training programs and establish minimum staffing requirements for building inspection in all local government jurisdictions, including the provision by the state of inspection services where necessary. (NB)

192. EFFECTIVENESS OF THE USE OF TELEPHONE INTERVIEW IN COLLECTING HOUSING STARTS STATISTICS

Main Investigator: Jack Silver.

Status of Research and Publications: In process.

Agency: U.S. Department of Commerce, Bureau of the Census, Construction Statistics Division.

Previous Digest Report: None.

Research Problem. To determine how well housing starts information obtained by telephone interviews agrees with information obtained by visiting actual construction sites in person.

Method of Study. Monthly housing starts estimates are based on information obtained from residential builders in a sample of 567 permit-issuing jurisdictions. A sample of building permits is selected each month by field interviewers who determine whether a building permit results in a housing start by conducting a telephone interview with the owner or builder. (JS)

193. HOUSING QUALITY STUDY

Main Investigator: Joseph M. Selove.

Status of Research and Publications: In process.

Agency: U.S. Department of Commerce, Bureau of the Census, Housing Division.

Previous Digest Report: None.

Research Problem. Develop concepts and measures of housing and neighborhood quality, objective enough to assure a greater degree of uniformity in interpretation and application than is at present possible.

The Department of Housing and Urban Development is in need of more effective measures of housing and neighborhood quality than those provided by condition-of-structure data collected in the Housing Census of 1960. The Census Bureau has collected information to describe structural condition of housing beginning with the 1940 Census of Housing. Data on this and related subjects are used by agencies of the federal government, local governmental bodies and private organizations to estimate housing needs, delineate areas in need of rehabilitation, and to develop plans for urban renewal. However, the concepts and methods employed in the 1960 Census of Housing for describing quality of housing have been found to be more reliable in large than in small areas. (JMS)

194. USE OF SELF-ENUMERATION TO OBTAIN INFORMATION ON CONDITION OF HOUSING

Main Investigator: Leon Pritzker.

Status of Research and Publications: In process.

Agency: U.S. Department of Commerce, Bureau of the Census.

Previous Digest Report: None.

Research Problem. Develop methods of producing statistics on condition of housing without visits by enumerators in order to eliminate visits to all housing units in the 1970 Census. Past censuses have provided these statistics through a process of ratings by enumerators of

structural adequacy of every housing unit in the United States, requiring a visit by an enumerator to each housing unit. Present plans for the 1970 Census envisage a substantial reduction in visits by enumerators to housing units. In urban areas, particularly, effort will be made to obtain census information by mail.

Method of Study. Investigate the reliability of block statistics on condition of housing compiled: (1) from data obtained by enumerators employing the 1960 Census method; (2) from data compiled by experts using this same method; (3) from data obtained by technically trained personnel employing the American Public Health Association methodology for appraising quality of housing; and (4) investigate the reliability and validity of using data on population and housing obtained in the 1964 Special Census of Louisville by self-enumeration. (LP)

195. PRIVATE OUTDOOR RECREATION ENTERPRISES

Main Investigators: Lester F. Faber, Luther Burnett and Robert K. Mac-Millan.

Status of Research and Publications: Completed. Survey results available for distribution June, 1966.

Agency: U.S. Department of the Interior, Bureau of Outdoor Recreation, through contract with Chilton Research Services.

Previous Digest Report: None.

Research Problem. Provide an estimate of the number and type of privately owned outdoor recreation enterprises in the United States and in each of the nine Census Divisions. Obtain a profile of these enterprises in terms of capacity, use, expansion plans, effect of other enterprises or resources nearby, fees charged, origin of patrons, nature and history of the operation, investment and financial problems.

Method of Study. Survey used area sampling techniques, with a stratified probability sample of 332 counties. Stratification was based on proximity to centers of population, population size, water surface area, climate, income, etc. Within each Census Division, counties were placed in groups of equal numbers. From each group, two counties were selected with equal probability. Each selected county was divided into 16 to 20 area sampling segments and two or three of these segments were then selected with equal probability. During mid-summer of 1965, interviewers cruised these segments and listed each observable private recreation enterprise and obtained an interview with the owner or manager. The recorded enterprises for each sample segment were checked against a telephone list of enterprises that had been prepared earlier with the assistance of a local committee in each of the sample counties. If the lists compared favorably for the sample segments, some assumptions were made about the accuracy of the list for the entire county. (DMO, Jr.)

196. THE 1965 NATIONAL RECREATION SURVEY

Main Investigators: Lester F. Faber, Charles C. Morrison, Jr.,
Robert B. Pearl and George Hall.

Status of Research and Publications: In process. Preliminary report
to be available fall of 1966.

Agency: U. S. Department of the Interior, Bureau of Outdoor Recreation,
through contract with U. S. Bureau of the Census.

Previous Digest Report: None.

Research Problem. To conduct a survey of national recreation
activities.

Method of Study. The 1965 National Recreation Survey was conducted by the Bureau of Census during the first two weeks of September, 1965. The approximately 8,000 sample persons interviewed in their homes in 333 primary sampling units throughout the country were selected from a group that had been rotated from the sample used for the August Current Population Survey. Participation in various outdoor recreation activities was measured (in "activity day" units) primarily with reference to vacations, other overnight recreation trips, and outings taken in the three summer months. In 1960-61, the survey was repeated four times, to cover each quarter of the year, but with a sample of only 4,000 persons each time. As in the earlier survey, the 1965 interview schedule included questions on activity preferences and facility constraints. It did achieve a rough measure of fall, winter and spring participation to provide some basis for trend evaluation. A major departure from the earlier format involved elimination of trip expenditure questions and of the section dealing with leisure time. It was felt that this information should be developed through other surveys. All participation, trip and preference results will be cross-tabulated against various socio-economic characteristics of each respondent. This will provide a basis for determining the nature of the influence of these characteristics on variations in data intensity. (DMO, Jr.)

197. THE GREAT SOCIETY'S POOR LAW: A NEW APPROACH TO POVERTY

Main Investigator: Sar A. Levitan.

Status of Research and Publications: Completion expected summer of
1967.

Agency: The W.E. Upjohn Institute for Employment Research, under
sponsorship of the Ford Foundation.

Previous Digest Report: None.

Research Problem. A critical review of the Economic Opportunity Act and evaluation of its first two years of activities.

Method of Study. A close follow-up of OEO operations, through personal contacts with officials of the agency and study of published and internal documents (to the extent they are made available); review of congressional hearings and reports; field work involving observations of projects funded by OEO. (SVB)

198. AFTER STUDY: VIRGINIA CAPITAL BELTWAY

Main Investigator: Julia Connolly.

Status of Research and Publications: In process.

Agency: University of Virginia, Bureau of Population and Economic Research.

Previous Digest Report: None.

Research Problem. Analyze the impact of the Beltway on land values, land use, neighborhood design and commercial growth. Study before and after conditions and assess the role of the Beltway in the changes discovered. (GT)

199. SASKATCHEWAN CULTURAL ECOLOGY RESEARCH PROGRAM

Main Investigator: John W. Bennett.

Status of Research and Publications: Field work completed. Two book-length studies in preparation. The first is about six colonies of Hutterian Brethren, to be published winter of 1966. The second concerns the Anglo-American and European population, to be completed in 1966.

Agency: Washington University (St. Louis), Department of Sociology and Anthropology, under sponsorship of Resources for the Future, Inc.

Previous Digest Report: 12:1-133.

Research Problem. A study of the social and economic development of a 5,000 square mile region in Western Saskatchewan, from the period of earliest Anglo-American settlement to the 1960's. Emphasis is placed upon the social adjustments necessary to accommodate economic changes induced by the natural resources situation. Studies of population, economic change and innovation, rural-urban relationships and cultural change are being made. Separate studies of the adaptive patterns demonstrated by the several ethnic groups have also been made. (JWB)

200. DESIGN OF REGIONAL ACCOUNTS

Main Investigators: Charles L. Leven and John Legler.

Status of Research and Publications: In process. Results, as they appear, to be published as working papers by the Institute for Urban and Regional Studies, Washington University. A few papers to be available summer of 1966. Final report to be submitted to Resources for the Future as subject matter for a Committee on Regional Accounts conference and for possible publication

Agency: Washington University (St. Louis), Institute for Urban and Regional Studies, under sponsorship of Resources for the Future, Inc., Committee on Urban Economics.

Previous Digest Report: None.

Research Problem. Development of a standardized system of accounts for the United States. Regional accounts of a variety of forms have been constructed on many occasions, for a number of metropolitan areas and larger regions. However, for no region do comparable accounts exist at more than one point in time, and for no two regions do directly comparable accounts exist at any given point in time. Standardization will utilize the research contribution of interregionally and intertemporally comparable data. Economies will be realized through centralized implementation. It is also intended that the accounts design recommended move in the direction of including stocks of physical and human capital in regions as well as current flow data.

Previous Relevant Research. Harvey S. Perloff and Charles L. Leven, "Toward an Integrated System of Regional Accounts: Stocks, Flows and the Analysis of the Public Sector," Elements of Regional Accounts, Werner Z. Hirsch (ed.), Baltimore, The Johns Hopkins Press, 1964.

Method of Study. Major problem areas involved in implementing a national system of regional accounts will be considered both conceptually and from a practical and operational viewpoint. Wherever possible, specific recommendations will be made, sometimes of a general nature and sometimes in more detail. Questions of data availability and cost of implementation will be discussed wherever possible. Specific topics to be investigated are: (1) Flow and Stock-Flow Systems in Regional Accounts; (2) Strategies for Regional Delimitation in a National System of Regional Accounts; (3) Data Requirements for a System of Regional Accounts; (4) Industry and Occupation of Employment and Demographic Characteristics; (5) Demographic Characteristics, Productivity and Regional Growth; (6) Land and Capital Input Requirements and the Scale of Output in the Long-Run; (7) The Quality of Private and Social Real Capital and the Growth of Economic Activity; (8) Changes in Economic Activities, Characteristics of the Population and Tax Yields and Capacity and Bonded Indebtedness; (9) The Tax Structure and Agglomeration of Economic Activities, Including Distribution Among Taxing Jurisdictions; (10) Composition of Economic Activities, Regional and Jurisdictional Scale and Public Expenditure Requirements; (11) Quality and Level of Public Services and Regional Incomes and Growth; (12) Regional Size and Function and the Intra-Metropolitan Pattern of Land Use; (13) The Pattern of Land Use and Regional Growth; (14) Regional Size and Function and the Pattern of Interregional Location. (CLL)

201. CRITERIA FOR WATER RESOURCE INVESTMENT

Main Investigators: Charles L. Leven and Richard Muth.

Status of Research and Publications: Completion expected summer of 1967. Results to be published initially as working papers of the Institute for Urban and Regional Studies. First paper available June, 1966.

Agency: Washington University (St. Louis), Institute for Urban and Regional Studies, under sponsorship of U.S. Corps of Army Engineers. The project is intended to be directly collaborative with a similar study at North Carolina State, George Tolley, main investigator. It is also, to some extent, coordinated with a project on water transportation at Northwestern University, Leon Moses and Robert Strotz, main investigators.

Previous Digest Report: None.

Research Problem. Determine developmental benefits in the evaluation of water resource projects. In ordinary benefit-cost formulations it is difficult to take into account the benefit of industrial agglomeration in project areas. Such benefits, if one does not assume full employment or necessarily efficient location, can have nonzero value. The valuation of such benefits and their separation into regional and national benefits is the main problem.

Method of Study. The work has been divided into a number of subprojects. Those conducted by Washington University are: Determination of Water Resource Characteristics of Water Resource Projects; Community Size and Agglomeration of Trade, Services and Other Locally Oriented Industries; Effect of Changing Regional Income, Output and Employment on State, Local and Federal Tax Bases; Effect of Productive Efficiency of Changes in the Location of Production; Private and Social Costs of Interregional Migration; Determining Goals of Federal Water Resources Investments; Evaluation of Future Effects; and Analytical Representation of Investment Alternatives. Those conducted by North Carolina State are: Quantification of Primary Benefits; Relation of Benefits to Project Scale; Location of Water Oriented Industries; Estimation of the Reduction of "Labor Slack" (Under, as Opposed to Unemployment as a Consequence of Regional Output and Employment Expansion); Effects on State and Local Social Overheads of Changing State and Local Tax Bases. Those conducted jointly are: Formulation of Regional and Interregional Multipliers and Information System Design for Regional and Interregional Multipliers; Effects of Projects on Structural Unemployment. (CLL)

202. PUBLIC INVESTMENT AND REGIONAL DEVELOPMENT

Main Investigators: Harold J. Barnett, Charles L. Leven, and Murray Weidenbaum.

Status of Research and Publications : In process. Results, as they are completed, to be available as working papers of the Department of Economics and the Institute for Urban and Regional Studies, Washington University. Completion of first paper expected spring, 1967.

Agency: Washington University (St. Louis), Department of Economics and the Institute of Urban and Regional Studies, under sponsorship of U.S. Economic Development Administration.

Previous Digest Report: None.

Research Problem. (1) To increase information concerning empirical relationships between public investment programs of particular types and regional development performance. One of the most serious limitations to the formulation of effective public policy for regional development is the dearth of such information. Project will focus upon the areas of natural resource development, investments in public facilities, investments in education and investments in urban amenities. (2) Develop a theory of regional growth, attempting to express forms of public investment explicitly as independent variables. (3) Analyze the question of effective decision rules under uncertainty and where objectives are not rigorously defined, making use of benefit-cost, rate of return, cost effectiveness and program and performance budgeting concepts. (CLL)

203. SOCIAL AND COMMUNITY PROBLEMS IN PUBLIC HOUSING AREAS

Main Investigators: Alvin W. Gouldner, David J. Pittman and Lee Rainwater.

Status of Research and Publications: In process. Completion expected in 1968.

Agency: Washington University (St. Louis), Social Science Institute, under sponsorship of the National Institute of Mental Health.

Previous Digest Report: None.

Research Problem. A community study from the broad perspective of modern social anthropology, rather than as an engineering task, designed to measure the effectiveness of such action programs as might be instituted by federal or local agencies. This research on public housing as a locus of key social institutions is expected to yield an analysis of the conditions underlying the pathological behavior currently found in urban public housing and hopefully, in new proposals for social remedies for these pathologies.

Method of Study. Participant observation, open-ended interviews and questionnaires. Seven areas have been selected for intensive study on the basis of their intrinsic importance to social and community problems: internal family dynamics, the street system, the schools, drinking behavior, intervention research, female homosexuality and the role of the church and religious values. In addition, the historic develop-

ment of public housing in St. Louis will be studied to place the particular housing project in its larger administrative and community context.
(LR)

204. CRITERIA FOR HIGHWAY BENEFIT ANALYSIS

Main Investigators: Robert G. Hennes and others.

Status of Research and Publications: Research completed. Publication of report in two volumes pending.

Agency: University of Washington, Department of Civil Engineering and others, under sponsorship of Highway Research Board.

Previous Digest Report: None.

Research Problem. (1) To provide estimates of the relevance of different types of benefit and cost data to different highway location and design decision-making processes. (2) To furnish (a) basic guides with respect to priorities for research on the consequences of highway improvement, (b) guidelines for highway agencies in assigning priorities to collection of data for the analysis of specific projects and (c) information basic to cost responsibility questions. (RGH)

205. FREQUENCY OF MENTAL DISORDERS IN THREE AREAS OF MICHIGAN, 1960-1970

Main Investigators: H. Warren Dunham and William Burkhardt.

Status of Research and Publications: Completed. To be published by Michigan State Department of Mental Health.

Agency: Wayne State University and Lafayette Clinic, with support from Michigan Department of Mental Health.

Previous Digest Report: None.

Research Problem. To estimate the number and type of mental disorders that will be found in selected areas of Michigan in 1970, in order to provide a basis for planning the number and kinds of facilities needed for their future detection, diagnosis, treatment, control and prevention. It is thought that these estimates can also provide a basis for making projections for comparable groups of counties throughout the state.

Method of Study. The areas selected were the Detroit Metropolitan Area, a rural area of four counties in the center of the state and an urban area consisting of all counties in Michigan's Upper Peninsula. Data concerning the numbers and types of mental disorders were collected primarily by mail; cases reported by state hospitals were secured from the computation laboratory; cases from private out-patient clinics were collected directly by a staff member. A population projection with a breakdown by age and sex for the groups of counties chosen was then made. Using the population projection and the percentages obtained from the data

collected from the year 1960, an estimate was made of the number of persons who would have some mental disorder in 1970.

Major Findings. The Detroit Metropolitan Area will have an increase of 3,000 to 4,000 mental cases by 1970, approximately one-third of them in the geriatrics group. There will probably be an increase of 900 to 1000 cases of psychoses which, as in the past, will be cared for largely on an in-patient basis.

While the projections show an over-all increase for total mental disorders of 178 in the Upper Peninsula and 22 in the rural area, we think any increase of cases is very unlikely as the total population in 1970 should about equal that of 1960. In the Upper Peninsula it is predicted that there will be a marked increase of the psychoses, minor emotional disturbances and mental retardation for the age groups 15-34, with the bulk of the cases falling in the 15-24 group. This same pattern of increase is predicted for the rural area.

Mental retardation is treated largely on an out-patient basis in the Upper Peninsula and the rural area as contrasted to its in-patient character in the Detroit Metropolitan Area. It is predicted that there will be hardly any increase in geriatrics cases in the Upper Peninsula and in the rural area. Any increase that does occur will hardly be marked enough in numbers to add to the existing psychiatric facilities. (HWD)

206. ESTABLISHING CRITERIA FOR SPEED LIMITS IN SCHOOL ZONES

Main Investigators: Everett C. Carter and Rajendra P. Jain.

Status of Research and Publications: Doctoral dissertation. Completion expected June, 1966. To be submitted as final report to the West Virginia State Road Commission.

Agency: West Virginia University, Department of Civil Engineering, under sponsorship of State Road Commission of West Virginia and U.S. Bureau of Public Roads.

Previous Digest Report: None.

Research Problem. Investigate the various factors that influence speeds through school zones to determine the feasibility of developing a mathematical formula for arriving at a reasonable speed limit, based upon the relationship of the most significant factors found.

Existing West Virginia law established a 15 mph statewide speed limit for all roads traversing school zones. This speed limit is an arbitrary one -- based not upon any engineering criteria, but upon an arbitrary decision or personal judgment as to what constitutes a "safe" speed limit. This single speed limit for all school zones, urban and rural, has caused considerable difficulty.

Previous Relevant Research. Comparison of Moderate and Low School Speed Zones Under Variable Conditions, State Highway Department of Georgia; A School Speed Limit Study, City and County of Denver, Colorado; A School Zone Speed Study, Bureau of Traffic Planning, Pittsburgh; Speed Zoning: A Theory and Its Proof, Department of Highways, Bureau of Traffic, Columbus, Ohio; A Comparative Survey of State Laws on Stopping for School Buses, School Zones, School Crossings and School Patrols, National Committee on Uniform Traffic Laws and Ordinances, Washington, D.C.

Method of Study. Prepare a short annotated bibliography of pertinent references. Assemble information on practices and/or research in other states pertaining to speed zoning for school zones. Conduct field investigations at approximately ten different schools under each of eight or ten different sets of conditions.

Major Findings. Better coordination between the State Road Commission and the State Board of Education is needed with respect to both the location and layout of all future school sites and signing, pavement markings and other traffic engineering measures required in school zones. Characteristics of drivers and their relationship to school zone speeds is an area of needed research. This study can serve as the basis for such research. (ECC and RPJ)

207. PRELIMINARY INVESTIGATION OF SIMPLIFIED METHODS FOR DEVELOPING TRANSPORTATION PLANS FOR SMALLER CITIES

Main Investigators: Everett C. Carter and Wilbur R. Jefferies.

Status of Research and Publications: In process. Completion expected September, 1966. To be published as an Engineering Experiment Station Research Report.

Agency: West Virginia University, Department of Civil Engineering.

Previous Digest Report: None.

Research Problem. To establish optimum methods of transportation planning for smaller cities.

Hypothesis. Procedures developed for comprehensive transportation planning in the large urban areas are both time-consuming and expensive. Simplification of these techniques or development of new ones will suffice for plan development in the smaller urban areas.

Method of Study. A study and evaluation of the literature on techniques available or being developed for transportation planning in small urban areas. Sources other than the home interview are being examined for use in collecting social-economic and land use data. Such data will be used along with origin and destination data obtained from a home interview to determine whether an abbreviated small sample home interview or substitute will be sufficient to forecast trip generation and to

calibrate a gravity model. The IBM 1620 computer will be used for all forecasting, distribution and traffic assignment. (ECC and WRJ)

208. DETERMINING THE FEASIBILITY AND ECONOMIC IMPACT OF VERTICAL OR SHORT TAKE OFF AND LANDING (V/STOL) AIRCRAFT FOR THE APPALACHIAN REGION

Main Investigators: Everett C. Carter and C. R. Keller.

Status of Research and Publications: In process.

Agency: West Virginia University, Department of Civil Engineering, under sponsorship of National Aeronautics and Space Administration.

Previous Digest Report: None.

Research Problem. To determine the feasibility and economic impact of vertical or short take off and landing (V/STOL) aircraft for the Appalachian region. Many areas in the Appalachian region are rather remote from a first class highway. In some there is potential for development, particularly recreational and industrial. There is also an abundance of open space and green areas, which urban residents seem to demand. However, other amenities of an urban area, such as a range of selective or comparative shopping opportunities, cultural programs, etc., are not present to any degree in the Appalachian region. Even with this development potential, the extremely high cost of highway facilities is often prohibitive, especially when the financial requirement for these highways must compete not only with those for other highway improvements, but also with state funds for education, welfare and other governmental programs.

Hypothesis. That the introduction of V/STOL air transportation service to the Appalachian region may be economically feasible and, if so, have a tremendous impact on the economic development of the entire region.

Method of Study. Evaluate the demand for V/STOL transportation in the Appalachian region. Investigate the economic feasibility of providing such service within a typical state, such as West Virginia. An attempt will be made to establish the potential benefits, in terms of increased economic development, from the provision of such air transportation service for the Appalachian region.

Because primary potential for V/STOL transportation service appears to lie in the existing commercial air travel market in the state, the present commercial air travel within West Virginia will be measured by sampling the outbound commercial flights with an in-flight passenger questionnaire, on a seasonal basis, throughout the state. The 1980 air travel within the state will be predicted by growth trend analysis. Study of the 1966 and 1980 resulting trip patterns will permit evaluation of a statewide supplementary V/STOL air transportation system. Additional data pertaining to V/STOL service will be collected from private aircraft owners and businesses by mail questionnaires

and personal interviews. An inventory of existing rail and bus passenger movements within the state will be analyzed to ascertain the effects of V/STOL service. Intercity automobile travel will be analyzed and an attempt made to predict possible diversion of intercity automobile trips to the V/STOL system.

Modified transportation planning and other statistical manipulations will be carried out on an IBM 7040 computer. An economic impact study of the effect of V/STOL service upon various potential markets within the state will also be conducted to estimate potential benefits of such service. (ECC and CRK)

209. AIR POLLUTION AND THE COMMUNITY IMAGE

Main Investigators: Robert E. Rankin, Fred B. Silberstein and Benjamin Linsky.

Status of Research and Publications: In process.

Agency: West Virginia University, Department of Civil Engineering, under sponsorship of U. S. Public Health Service.

Previous Digest Report: None.

Research Problem. (1) Contribute new information about the impact of air pollution on the public and its image of the community. (2) Assess the personal factors which may be of concern to agencies responsible for abatement programs, especially where these involve public information and acceptance.

Method of Study. These variables will be assessed by opinion questionnaires presented to random or area probability samples within Charleston, West Virginia, and in three smaller areas selected from aerometric and gas-odor survey data to represent basic types of pollution (odor and/or gas, large dustfall and small dustfall). Emphasis in the data from the three smaller areas will be upon the effect of different primary pollutants in the neighborhood on concepts and attitudes about the air and its possible effects. It is anticipated that the data from Charleston (corporate limits) will represent populations exposed to more heterogeneous, less specific and concentrated, pollutants. (PHS)

210. LAND USE AND PLANNING CONTROLS

Main Investigators: Robert D. Fowler and A. H. Stocks.

Status of Research and Publications: Completion expected by June, 1966. Findings to be published by U.S. Bureau of Public Roads.

Agency: University of West Virginia, Departments of Industrial Engineering and Economics, under sponsorship of U.S. Bureau of Public Roads.

Previous Digest Report: None.

Research Problem. Determine the importance of police power regulations in protecting highway investment. (GT)

211. STATE GOVERNMENT DEVELOPMENT LOAN PROGRAMS

Main Investigator: Gerald Sazama.

Status of Research and Publications: Completion expected fall of 1966.

Agency: University of Wisconsin, Department of Economics.

Previous Digest Report: None.

Research Problem. Examine the issues involved in states granting loans to industry and conduct a benefit cost study of the five largest programs now in operation. (GT)

212. LONG SWINGS IN URBAN BUILDING ACTIVITY

Main Investigator: Manuel Gottlieb.

Status of Research and Publications: Completed. Papers related to this research scheduled for publication include "Ohio Building, 1837-1912," Conference on Research in Income and Wealth; and "New Measures of Value of Nonfarm Building U.S.A. Annually, 1850-1939," Review of Economics and Statistics.

Agency: University of Wisconsin (Milwaukee).

Previous Digest Report: None.

Research Problem. Analysis of long swings in urban building and associated developments in realty markets and demographic activity. This study considers what happens in the realm of new building both as a whole and by types, and with accompanying shifts in real estate purchases, mortgage lending, lot development and foreclosure. The processes of long swings are traced to shed light on the causal forces at work. These causal forces are related to the surging tides of demographic growth and the alternating waves of over-and under-building reflected in the systematic behavior of vacancies. These causal forces are also related to the differential response of price and value levels and their crucial margins, which in turn reflect and grow out of varied patterns of market behavior and price formation and varied elasticities of supply. (MG)

213. GUIDELINES FOR REDUCING POLLUTION IN CANADA

Main Investigator: Pierre-Yves Pepin.

Status of Research and Publications: Completed. Findings to be published together with other texts in spring of 1966 by the CCMR in preparation for the national conference on "Pollution of Our Environment," Montreal, October 31-November 4, 1966.

Agency: University of Montreal, Institute of Urban Affairs, under sponsorship of the Canadian Council of Ministries of Resources.

Previous Digest Report: None.

Research Problem. Examine the many aspects of pollution and offer some guidelines for its abatement.

Method of Study. Because several interest groups are concerned (industry, government and the general population), it was first necessary to trace the development of pollution and to ascertain which portion is due to technological evolution and accelerated urbanization, and which to man's carelessness and error.

Major Findings. Four series of guiding principles were established: (a) a social plan, (b) a scientific plan, (c) a politico-judicial plan, (d) an economic plan. The basic conclusion of the study is that from a world where man was dominated by nature and at the mercy of the elements, we are going toward a world where man will have a fantastic control of his destiny in a tamed environment. It is by foreseeing the balance of the new system that pollution will be decreased. Its total disappearance, however, cannot be attained because it is a by-product of life and of human activity. (PYP)

214. THE RELATIVITY OF POVERTY IN THE MARITIME PROVINCES

Main Investigator: Pierre-Yves Pepin.

Status of Research and Publications: Completed. To be published as an ARDA research report, summer of 1966.

Agency: University of Montreal, Institute of Urban Affairs, under sponsorship of ARDA Administration, Department of Forestry, Ottawa, Canada.

Previous Digest Report: 12:2-148.

Research Problem. To define more precisely the nature and the relative idea of poverty in the Maritime Provinces.

Major Findings. Agriculture has disappeared almost completely and forestry has become a secondary occupation. People are concentrated on the coast and earn incomes which usually average less than \$3,000 a year. There is no hope of substantial and rapid improvement. Therefore, the young people emigrate usually to New England or Ontario. Thus, the average age of workers engaged in primary occupations is very high, 45-50 years. There exists no miraculous solution to these circumstances. However, regional planning can be important for these people whose thinking and lives are riveted to a local level. Regional planning can assure some control over emigration by granting a more advanced general and technical education for future inhabitants. (PYP)

NEW URBAN AND REGIONAL RESEARCH AND TRAINING PROGRAMS

Undergraduate Scholarship Program, University of Illinois

This past spring the University of Illinois awarded its first Richard King Mellon Undergraduate Scholarships, the only scholarship program in the United States established specifically for undergraduates working toward a degree in Urban Planning. Four more have been awarded for the academic year 1966-67. Eligible for these annual scholarships are freshmen entering the Department of Urban Planning and the University of Illinois, and students eligible for junior standing in the Department of Urban Planning. Each scholarship consists of a minimum grant to cover tuition and fee expenses and may include a cash stipend as well. Recipients may apply for a renewal of the award by maintaining a satisfactory honor point average. Applications are to be filed no later than January 1 for awards made for the following academic year. Application should be made to the University of Illinois Committee on Undergraduate Scholarships on forms available in the office of the Director of the Undergraduate Scholarship Program, 907 S. Sixth Street, Champaign, Illinois 61822. For further information contact the Department of Urban Planning, University of Illinois, Urbana, Illinois 61803.

Urban Transportation Planning Program, Brooklyn Polytechnic Institute

The Department of Civil Engineering at Polytechnic Institute of Brooklyn is offering a new program in urban transportation planning which leads to a master of science degree. The program is open to persons with bachelor's degrees in engineering, architecture, mathematics or physics. The required courses provide for an analytical approach to planning, designing and operating transportation facilities. Electives are designed to enable the student to broaden his knowledge in the fields of city planning, social sciences and systems analysis. Courses in operations research and systems dynamics are offered. Within the next two years, new courses will be added in urban mass transportation, analytical techniques for urban transportation planning, and urban geography. For specific information concerning the program, contact Louis J. Pignataro, Department of Civil Engineering, Polytechnic Institute of Brooklyn, 333 Jay Street, Brooklyn, New York 11201.

Urban Planning Assistance Project, Southern Regional Council, Inc.

To slow the trend toward establishing ghettos and to develop positive programs to reverse that trend, the Southern Regional Council, Inc. is launching an urban planning project, under the direction of Moreland Smith. Major emphasis will be on offering technical assistance to urban planners and other public officials. This is already being done in one city in Florida. The project will attempt also to offer assistance to the appropriate departments of the federal government and to study, analyze and interpret the role of these departments. Special attention will be given to the regional and state offices of these departments. Consultative services will be available to local groups who wish to develop an interest in this area and to those who wish to stabilize a changing neighborhood or those who want to begin the pro-

cess of neighborhood integration. Programs concerned with neighborhood improvement will also be assisted. An incidental but important part will be to work with schools of architecture and urban planning in curriculum development to see that planners now being trained will have a better understanding of the necessary technical and social aspects of adequate urban planning. Other projects of interest are being carried out by the Council in labor, education and in connection with fair employment and anti-poverty programs. Further information about the Council and its activities can be obtained from Paul Anthony, Executive Director, 5 Forsyth Street, N.W., Atlanta, Georgia 30303.

Michigan Community Action Program

The Metropolitan Fund, Inc., a nonprofit urban affairs foundation serving the six counties of Macomb, Monroe, Oakland, St. Clair, Washtenaw and Wayne and the City of Detroit in southeast Michigan, was formed early in 1965 to effectuate cooperation and coordination of anti-poverty activities on a total metropolitan-wide approach. The Detroit metropolitan area embraces some 404 local governments, over 400 square miles of territory, and some 4 million people. Although some metropolitan-wide agencies do exist, this concentration of people and governments has rarely worked together for the common solving of problems.

During the first year of its activity, staff effort was directed toward basic organization of community action effort. By the end of 1965, a Regional Coordinating Committee composed of the chairmen and staff directors of the seven major community action agencies and the Managing Director of the United Community Services of Detroit was established, meeting and developing plans for the metropolitan community.

Present work plans include exchange of information on local program development and operation -- problems encountered and solutions attained; development of programs to satisfy regional training needs; development of a common poverty data base in the region by a technical subcommittee

As local community action agencies progress in their development, attention is being broadened to other segments of activity. The Regional Coordinating Committee and the staff will devote attention to such other federally financed programs as housing and urban development, health, education and welfare, and employment. The Committee has discussed the development of a metropolitan-wide health component for the aged. It has authorized appointment of a research sub-committee to examine health needs in the metropolitan area. It will also explore the possibility of a metropolitan-wide small business development center component. The Committee will assist in coordinating the various existing and proposed pieces of housing legislation. The groups involved meet regularly with the Poverty Consultant. For further information, contact Alan Beals, Poverty Consultant, Metropolitan Fund, Inc., One Woodward Avenue, Detroit Michigan 48226.

Sociology In The Urban High School Curriculum

A nation-wide study of sociology in the urban high school curriculum is being conducted by the Community Research Division of the Center for Urban Edu-

cation, 33 West 42nd Street, New York, New York, 10036. This study is expected to lead to the Center's becoming a resource center for teachers and professional people interested in materials and resource personnel concerned with sociology or social problems in the urban high school curriculum. In addition to examining the types of courses offered, the study seeks to gauge the degree to which and method by which social problems are incorporated into high school curricula in urban areas. Main investigators are Robert A. Dentler and James Elsbery. Completion is scheduled for 1969.

RESEARCH MATERIALS AND METHODS

County Business Patterns on Annual Basis

The Census Bureau has placed on an annual basis its widely used series of reports called "County Business Patterns" which, based upon Social Security Records, present employment and payroll data by industry and kind of business for each county. The new reports are published on a faster time schedule and give more detailed geographic information than previously. The 1964 series has now been published and is available from the Government Printing Office.

Methods of Economic Regionalization

Resources for the Future, Inc. has made a grant to the University of Chicago in partial support of research to be conducted by the Commission on Methods of Economic Regionalization of the International Geographical Union. Work will involve international cooperation on five studies: (1) concepts of economic regionalization; (2) effects of political-administrative divisions in national and regional economies; (3) mathematical methods of economic regionalization; (4) practical experiments in economic regionalization and the problem of regional typologies; (5) an international bibliography. Research is being conducted by six members of the Commission. K. Dziewonski of Poland is the chairman. The program calls for two years of intensive work with interim reports, and a Commission meeting in Strasbourg, France, in 1967. Final reports are to be made to the International Geographical Union in Delhi in 1968.

New York Regional Statistical Center

In January, 1966, the New York Regional Statistical Center was established by the New York Chapter, American Statistical Association. The Center was created as an operating organization in order to accelerate the development of more adequate statistics for the New York Community and to function as a service center in the area of regional statistical work. The term "regional" refers to the 22 New York, New Jersey and Connecticut counties within about a 50 mile radius of Times Square. Three initial projects of the Center deal with the development of an inventory of statistical generating sources and data sources within the Region, the publication of a Regional Statistical Bulletin, and a program to pinpoint statistical gaps and areas of appropriate new development of data which the cooperative effort may suggest. The Center is under the supervision of John I. Griffin, Director, and Richard Carstens, Administrator. It is located at 17 Lexington Avenue, New York, New York, 10010.

TRANSPORTATION

Highway Capacity Manual

The Highway Capacity Manual, Special Report No. 87. Highway Research Board, Publications Department 805, 2101 Constitution Avenue, N.W., Washington, D. C. 20418. 397 pp. Hard cover edition, \$10.00; soft cover edition, \$8.00.

This completely revised edition of the Highway Capacity Manual, originally published in 1950, marks the culmination of over seven years of effort by the Board's Committee on Highway Capacity. As with the original edition, the new Manual is primarily a practical guide for traffic engineers as well as a text for use by educators. It permits the reader to determine the capacity, volume, or service level that will be provided, under specified conditions, by either new or existing highways. Conversely, the manual can be used to learn, given a certain traffic demand, what highway design will be needed to handle that demand at a given level of service. The traffic-carrying abilities of all common types of highways and their component parts are discussed. Although the emphasis is on freeways because of their widespread use today, considerable attention is also devoted to rural multi-lane and two-lane roads, urban arterials, downtown streets, and at-grade intersections.

CONFERENCES AND INSTITUTES

Conference on Urban Planning Information Systems and Programs

The Fourth Annual Conference on Urban Planning Information Systems and Programs will be held in Berkeley, California, August 19-21, 1966. Topics in this year's sessions will include data systems for state and local governments; information systems; intelligence systems; real-time time sharing systems; theory and application of geographical information retrieval; and gaming simulation. For more information contact Andrei Rogers, Conference Chairman, Department of City and Regional Planning, University of California, Berkeley, California 94704.

Summer Short Course in Urban and Regional Information Systems

Readers concerned with establishment and operation of data banks, and data processing specialists interested in system functional requirements will be interested in a short course on urban and regional information systems offered August 8-12, at the University of California, Los Angeles. The sponsors are the University of California Institute of Library Research, and Physical Sciences Extension and Engineering Extension, University of California Extension, Los Angeles. Four major problem areas will be considered: the value and use of such systems, systems operation, the use of equipment, and systems organization and design. Enrollment is limited to those with a bachelor's degree or equivalent experience and established background in public policy and administration or in data processing systems. For further information contact R. E. Garrels, Physical Sciences Extension, Room 6532, Boelter Hall, University of California, Los Angeles, California 90024.

Community Research and Development Programs at SSSP Meetings

Two program sessions are planned by the Committee on Community Research and Development for the meetings of the Society for the Study of Social Problems in Miami Beach, August 27th and 28th. One will be oriented to Research on Community Action Programs (OEO or others) and is to be a joint session with the Rural Sociological Society. The other will be open to various topics of community interest, but those dealing with content relevant to the program's theme of "The Role of Force and Power in the Creation and Solution of Social Problems" will be given special consideration. For more information contact Willis A. Sutton, Jr., Chairman of the Committee, Department of Sociology, University of Kentucky, Lexington, Kentucky 40506.

Summer Institute in Social Psychology

The second institute on social psychology is to be held August 15-September 15, 1966, at the University of Louvain, under the joint sponsorship of the committee on Transnational Social Psychology of the Social Science Research Council, and the European Association for the Advancement of Experimental Social Psychology through its affiliate, the European Foundation for Summer Schools in Social Psychology. The committee in charge is chaired by M. Moscovici of the University of Louvain. The Institute is planned primarily for mature social psychologists in Europe who are engaged in research but who have need for broader methodological training.

BIBLIOGRAPHIES AND RELATED SERVICES

Auto Parking Studies

Bibliography of Auto Parking Information, Bibliography No. 37. U.S. Bureau of Public Roads. Available from Highway Research Board, Publications Department 805, 2101 Constitution Avenue, N.W., Washington, D. C. 20418. \$1.40 a copy.

Contains some 380 different annotated entries, selected from references gathered over a two-year period (1962-64), covering such aspects as surveys, meters, land use, facility design and effects on retail trade. Contents arranged chronologically in an item accession order. Subject, author and geographic indexes are also provided.

AIA Research Survey

AIA Research Survey - 1966. Benjamin H. Evans, AIA Director of Research Programs. The American Institute of Architects, 1735 New York Avenue, N.W., Washington, D. C. 20006. Variousy paged.

This is the second issue of the annual survey, replacing and supplementing the earlier one. The main body of the report contains an alphabetical listing of research agencies which responded to the Survey in the past two years. To the degree that the agency supplied information, each listing includes the administrative director of the research organization; the research staff with biographical data; a listing of current research projects describing briefly the authors, budget, dates and publications; a listing of completed

research projects dating back to 1955. The volume also includes organizational, project and personnel indexes

Canadian Urban and Regional Research

Urban and Regional References Urbaines et Regionales: Supplement 1963-64. Canadian Council on Urban and Regional Research. Suite 308, 225 Metcalf, Ottawa 4, Canada. Original book of References and Supplement, \$8 00 References only, \$6.00. Supplement only, \$3.00.

A supplement to the main volume which was published in 1964 and contained approximately 1750 items covering the period 1945-62. The Supplement contains an additional 1300 items, classified into seven subject groups, which are further sub-divided. Items are entered by author, with title and date. Some entries include annotations. A consolidated table of contents and combined author and geographical indexes, covering the 3000 items in both issues, are provided in the Supplement. A new service, listing urban research in process has been launched in this Supplement. This section lists approximately 125 studies and projects in process in the field of urban research, with published results expected during the period 1965-1967. Abstracts are provided with some of the entries

A Bibliography for Regional Development, First Issue, Ontario

Ontario Department of Economics and Development, Regional Development Division, Toronto, Canada, February, 1965. 112 pp. mimeographed.

A list of references to regional development studies in Ontario, Canada. Entries are classified and listed alphabetically by author or originating agency. The references are abbreviated entries taken from a card index of material prepared under the supervision of A.J. Dakin, Head of the Division of Town and Regional Planning, University of Toronto.

The intention is to develop a card index of references which will be of assistance to agencies and individuals concerned with regional development and planning. The cards, containing material dealing with Ontario, other Canadian provinces and certain states of the U.S.A., contain more extensive information

It is intended that the process of recording and classifying references be a continuing one over a period of years until a comprehensive index is achieved. The card index is available for reference by enquirers.

Federal Programs

Catalogs and other Information Sources on Federal and State Aid Programs. A Selected Bibliography. Advisory Commission on Intergovernmental Relations. Washington, D. C. 20575. May 31, 1966. 13 pp. Mimeographed

A listing of handbooks and catalogs which present compilations of program descriptions for broad functional areas, levels of government, types of recipients, etc. Contains sections on catalogs issued by federal agencies, catalogs issued by organizations of public officials, state catalogs and related publications of the Advisory Commission

Catalog of Federal Programs for Individual and Community Improvement. Information Center, Office of Economic Opportunity, Washington, D. C. December 15, 1965. 414 pp.

A description of governmental programs to help individuals and communities meet their own goals for economic and social development. Approximately 275 entries. Each entry explains the nature and purpose of the program, specifies major eligibility requirements, tells where to apply, and lists printed materials available. In addition to a master index, an alphabetical subject index and program indexes, the volume contains special applicant, subject and volunteer indexes.

A Guide to Federal Programs for Illinois Communities. Scott Keyes, William T. Gelman, Michael A. Carroll and Charles E. Whalen. University of Illinois: College of Fine and Applied Arts, Bureau of Community Planning; College of Agriculture, Department of Agricultural Economics, Cooperative Extension Service. Approximately 200 pp. Available in near future from Bureau of Community Planning, University of Illinois, Urbana, Illinois.

A compendium of information about federal aids, prepared to help governmental officials and others become aware of the development assistance programs available to Illinois communities. Approximately 250 programs are cited. For each program these items of information are given: agency and program; legal citation; purpose; aids available: technical assistance, planning support, and development support; eligibility; requirements; other relevant information; administrative contact; reference. Contents are arranged alphabetically by federal departments and agencies; indexed by subject matter.

International References on Urban Affairs

An International Bibliography and Reference Guide on Urban Affairs. Ramsey-Wallace Corporation, 88 W. Main Street, Ramsey, New Jersey 07446. 1966.

The Bibliography consists of approximately 500 references including titles and brief descriptions of books, articles and technical papers on urban affairs and problems, ranging from an article published in 1723 to contemporary sources. In addition to numerous publications from the United States, many other countries are represented, including Argentina, Brazil, Great Britain, Tanganyika and the USSR.

Research on Poverty

Research on Poverty. United States Department of Agriculture, Economic Research Service, Washington, D.C. January 31, 1966. Preliminary edition. 197 pp., mimeographed.

A survey of poverty-related studies in process or completed since January 1, 1963 by non-governmental organizations, state and local governmental agencies, and non-land grant colleges and universities. The study contains approximately 200 annotated entries concerning on-going research, and 700 entries of studies published since 1963. Materials are divided into

six major categories, according to the subject matter with which they are principally concerned: the general study of poverty, community and neighborhood organization and planning; employment, unemployment and job training; education; health, welfare and related activities; and housing and urban renewal. Each major category has been subdivided into five sub-categories according to the focus brought to bear in the particular study.

Urban Real Estate Research

Urban Real Estate Research--1964. Jerome P. Pickard and Gene C. Tweraser. Urban Land Institute, 1200 18th Street, N.W., Washington, D. C. 20036. 91 pp. \$4.00 a copy; \$2.00 to ULI members and libraries.

This is the seventh in the series of Urban Real Estate Research inventories and the sixth annual volume. Part I, research work in process, or completed but not published at the end of 1964, includes 312 items listed under 52 topical headings. Between 10 and 24 entries occur under each of the following topics: economic base studies; housing market; land planning and use: general, development, metropolitan and urban areas; recreation, parks, and open space; metropolitan area studies, real estate market; regional studies; shopping centers and commercial areas; transportation: highway and expressway impacts; and urban research data sources and systems analysis. Part II contains 639 annotated entries of published works and completed dissertations in urban research. The volume is indexed by author and subject.

Metropolitan Area Studies

The Institute of Governmental Studies at the University of California (Berkeley) reports that Barbara Hudson is updating the extensive PAS bibliography on metropolitan area studies. Her work will include the major books, periodical articles and documentary material on the subject of metropolitan problems issued during the period 1958 through 1964. It will be a second supplementary volume to Metropolitan Communities, a Bibliography and Metropolitan Communities; a Bibliography Supplement 1955-1957 published by Public Administration Service. The subject arrangement will in general follow that of the earlier volumes.

NEW PERIODICALS

Urban Design Worksheets

The American Institute of Architects is now issuing a monthly report, Urban Design Worksheet, devoted to the application of urban design techniques to architectural practice. The worksheets concentrate on the practical working concepts in cities, large and small. They vary in length and format. Some are mostly graphic; others are in the form of a checklist; still others in the typical text layout or a combination of forms. Varied in subject matter, the worksheets sometimes discuss minute urban design details; at others, the design aspects of regional planning. The worksheets also report on current projects which have relevance to other practitioners. For further information contact Paul D. Spreiregen, American Institute of Architects, Director, Urban Design Programs, The Octagon, 1735 New York Avenue, N.W., Washington, D. C. 20006

The Urban Review

On May 1, the Center for Urban Education (see page 103, Digest 12:2) began issuing a new monthly publication, The Urban Review. Its aim is to achieve better communication between the educational practitioner, policy-maker, and scholar of urban education by promoting free and frank dialogue between these diverse groups. Although devoted mainly to articles, the publication contains brief notices of the Center's research and development programs, conferences, and publications.

Small-Area-Data Activities

Users and producers of small area data will be interested in a new information sheet called Small-Area-Data Activities sponsored and "issued occasionally" by the Census Bureau's Advisory Committee on Small-Area Data. The second issue was published May, 1966. Its purpose is to serve as an information exchange to keep both the users and producers of small-area data informed as to needs, new programs, new publications, and other relevant items.

Poverty and Human Resources Abstracts

A new publication entitled Poverty and Human Resources Abstracts, is now being issued six times a year under the auspices of the Institute of Labor and Industrial Relations, sponsored jointly by the University of Michigan and Wayne State University. Each issue of about 200 pages includes detailed abstracts, shorter annotations, bibliographic references, a review article, and a section on national and state legislative developments. PHRA is available in a paperbound edition at \$40 a year and a looseleaf edition at \$30 a year. Address inquiries to Institute of Labor and Industrial Relations, the University of Michigan-Wayne State University, P. O. Box 1567, the University of Michigan, Ann Arbor, Michigan 48106.

MISCELLANEOUS

Exercise in Intercultural Communication

In light of the world-wide scope of regional planning problems and the increasing collaboration of American planners with those of other countries, we were interested in a project concerning intercultural communication. In response to our inquiry, one of the participants, Francis Myers, University of Denver, Department of Philosophy, sent this description of the project: "I am attempting an exercise in intercultural communication and understanding by means of a collaboration with four Peruvian intellectuals. Instead of talking or writing about communication, our aim is to write about rather concrete problems, to see whether or not we are communicating with each other about them. We are using the literary device of an exchange of letters, because it permits greater flexibility and informality, and a sense of personal contact." The collaborators in the experiment are Salazar Bondy, a philosopher, Jorge Bravo Bresani, an economist, Ricardo Rodriguez Farje, a lawyer and sociologist, and Javier Mariategui, a psychiatrist.

Longer-Term Research Support by NSF

Last January, the National Science Foundation announced that beginning April 1, it would begin awarding Continuing Research Grants. Long-term research projects of high scientific merit involving scientists with a record of outstanding research accomplishment will be considered for scientific approval for periods up to a maximum of five years. Selected projects will be funded initially for approximately two years and thereafter annually for the approved full-term of the grant. Normally no new research proposal will be required over the term of a Continuing Research Grant. Support beyond the first two-year period will be contingent upon the availability of funds and the scientific progress of the research project.

AVAILABLE BACK ISSUES OF RESEARCH DIGEST

A few copies of the back issues below are still available. Issues through Vol. 10, No. 1 may be purchased at \$1.00 per copy. Beginning with Vol.10, No. 2 the price is \$2.00 to individuals and \$3.00 to organizations.

| | | |
|---------|-------|----------------|
| Vol. 8 | No. 2 | November, 1961 |
| Vol. 9 | No. 1 | April, 1962 |
| Vol. 10 | No. 1 | April, 1963 |

A few copies of the Indexes to Volume 9, Volume 10, Volume 11 and Volume 12 are also available at \$1.00 each.

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Research Digest

Volume 13

Number 2

Fall and Winter, 1966

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Editorial Notes

Because of their significance to planning, and because of interest expressed by our readers, this issue carries short supplements devoted to Low-Income Housing Demonstration Projects and Urban Renewal Demonstration Projects. They are, for the most part, under the sponsorship of the U. S. Department of Housing and Urban Development. The supplements are not intended to be complete or comprehensive surveys. Rather, they are intended to show the range and variety of projects being conducted within these areas.

Founded in 1954 by an informal organization known as the Urban Planning Research Group, the Research Digest is prepared and distributed semi-annually by the Bureau of Community Planning of the University of Illinois. Its objective is to serve as a medium of communication among individuals and groups engaged in urban and regional research. Abstracts are invited covering research projects recently initiated, projects well underway on which significant progress or findings can be reported, and projects recently completed. Brief notes on items of interest to researchers in this field are also desired, as are special articles in keeping with the character of the publication. Subscription is \$4.00 per year for individuals and \$6.00 for organizations. Address all communications to Research Digest, Bureau of Community Planning, University of Illinois, 1202 West California Avenue, Urbana, Illinois 61801.

RESEARCH DIGEST

Volume 13 Number 2 Fall and Winter, 1966

Bureau of Community Planning . University of Illinois

PLANNING RESEARCH

A Register of Research for all those interested in City
Planning and Allied Fields.

The Editor of Research Digest is pleased to announce that arrangements have recently been completed with the Town Planning Institute of Great Britain to distribute their publication Planning Research throughout the United States.

Planning Research is a unique record of research in City Planning and its related fields by the staffs of local planning authorities, universities, and research institutes in Great Britain. This is a new and greatly enlarged edition. The period covered by the Register is 1948 to 1963 extending the first edition by five years. Twice as many entries are recorded in this edition and runs to 256 pages.

Planning Research has a dual function. Not only is it a valuable source of reference but it indicates to the reader in what fields research still needs to be done. The Royal Institution of Chartered Surveyors and the Institute of Landscape Architects have cooperated in this edition and new subjects have been introduced to meet the needs of their members.

A new feature incorporated is a series of trend reports reviewing research on particular subjects since World War II. As a work of reference, the Register will be of use not only to those directly engaged in the planning profession, but also to landscape architects, municipal engineers, geographers, social scientists, and all those interested in urban and regional affairs.

Planning Research. July, 1965. 256 pp. Price \$6.25. Copies are obtainable from the Bureau of Community Planning, University of Illinois, 1202 West California Avenue, Urbana, Illinois 61801.

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UNITED STATES

1. RESEARCH IN COMMUNITY MENTAL HEALTH PRACTICES

Main Investigators: Israel Zwerling, Joan Barber, Harris B. Peck, Joseph Dorsey, Walter Friedman, Marvin Herz, and Jack Wilder.

Status of Research and Publications: In process.

Agency: Albert Einstein College of Medicine, under sponsorship of U. S. Department of Health, Education, and Welfare.

Previous Digest Report: None.

Research Problem. To test and evaluate innovations in community psychiatry, in an effort to produce conceptual clarity, procedural specificity, and clinical soundness in this field. The trend from institutional to community care of psychiatric patients has grown at an accelerating rate during the past two decades. A wide range of modifications in traditional diagnostic and therapeutic approaches has emerged, and efforts in preventive and rehabilitative directions have been extended as well. Because of the rapidity of change, innovations have tended to be conceptually confused, procedurally undefined with regard to criteria and technics, and clinically of undetermined effectiveness.

Method of Study. The Clinical Center for Family and Small Group Research at Albert Einstein College of Medicine is conducting a series of projects in which the most significant innovations in modalities, practices, and technics identified as component elements of these current trends are systematically demonstrated and evaluated. (IZ)

2. VIEW PROTECTION

Main Investigator: Margot S. Parke.

Status of Research and Publications: Completed. Report published August, 1966. Available only to subscribers to ASPO Planning Advisory Service.

Agency: American Society of Planning Officials.

Previous Digest Report: 12:2-4

Research Problem. Examine zoning ordinance provisions which have been devised to prevent view obstruction and show the relationship between a jurisdiction's view objectives and the techniques adopted to implement them.

Method of Study. County and municipal zoning ordinances were examined. This was followed by a questionnaire sent to 76 planning agencies representing 60 municipalities, 13 counties, and three states.

Major Findings. Of those contacted, eleven municipalities, five counties, and two states were found to have adopted or proposed zoning regulations specifically to protect views. Many jurisdictions have been hesitant to justify regulatory devices on grounds that are essentially aesthetic. However, views are also an amenity reflected in private property values and the overall prestige of the community. To some extent, views may be protected indirectly through zoning provisions to control density or to ensure light and air. Where view protection is a specific public goal, however, it should be so stated in the zoning ordinance. A number of ordinances restrict height for the purpose of protecting views. Building bulk and spacing of buildings are regulated less frequently, although they may be of greater importance than height. (MSP)

3. PLANNING LAW: SOME PROPOSALS FOR CHANGE

Main Investigator: Richard F. Counts, Jr.

Status of Research and Publications: Completed. Report published October, 1966. Available only to subscribers to ASPO Planning Advisory Service.

Agency: American Society of Planning Officials.

Previous Digest Report: None.

Research Problem. To synthesize specific recommendations for improvement of American land-use control practice made by authorities in the fields of law and planning.

Method of Study. Current literature in law and planning was examined. Suggestions for law revision were grouped according to problem areas most frequently cited.

Major Findings. Present land-use controls, e.g., zoning regulations, are insufficient for guiding development in undeveloped fringe areas. Increased flexibility of regulation and new institutions for administrative review are necessary for the best application of technical expertise in the administration of planning law for metropolitan communities at different stages of urban growth. (LAG)

4. PLANNING AND ZONING LAW AND PRACTICE IN CONNECTICUT

Main Investigators: Dennis O'Harrow, Jerome L. Kaufman, Jack Noble, Michael J. Meshenberg, Leopold A. Goldschmidt, and Richard F. Counts, Jr.

Status of Research and Publications: In process. Completion scheduled for February, 1967.

Agency: American Society of Planning Officials, under sponsorship of the Connecticut Development Commission.

Previous Digest Report: 13:1-3.

Research Problem. To establish a basis for making changes in Connecticut planning, zoning and related statutes, particularly changes which will: strengthen the relationship of zoning to planning; provide new methods, techniques, and organizations for planning and zoning; guide and direct the broad scope of community development in accordance with present-day standards and future requirements; and correct inconsistencies and ambiguous provisions, including definitions, in the statutes.

Method of Study. Questionnaires, field interviews, analysis of court cases and state statutes were some of the principal study techniques used.

Major Findings. A number of important guiding principles underlying the revision of enabling legislation have been identified. According to the findings, it is particularly important to: unify planning, development and regulatory processes; give localities broad choice in establishing governmental structure to handle planning, development and regulatory processes; promote greater procedural fairness and uniformity; extend powers of local units to deal more effectively with undeveloped areas and areas that are basically built-up; promote the proper use of new local powers with more qualified board members and technicians; insure higher-level considerations being taken into account in local planning and development by judiciously increasing advisory review and regulatory roles of higher-level governments. (JK)

5. PROBLEMS OF ZONING AND LAND-USE REGULATION IN THE UNITED STATES

Main Investigators: Dennis O'Harrow, Jack Noble, and Richard F. Counts, Jr.

Status of Research and Publications: Completed. Report not currently available for distribution.

Agency: American Society of Planning Officials, under sponsorship of U. S. Department of Housing and Urban Development

Previous Digest Report: None

Research Problem. To review land-use control problems for consideration by the Commission on Housing and Building Codes, Zoning, Tax Policies and Development Standards, and to suggest topics for research that the Commission might wish to recommend

Method of Study. General areas of goal conflict were determined on the basis of research undertaken by the Society. Specific problems in land-use control were identified and discussed in terms of national significance. Seventy-five persons knowledgeable in the field of zoning and land-use regulations were asked to comment on an outline which suggested major goal conflicts and problems

Major Findings. Most important problems in current land-use regulations were: (1) Conflict between regional and local objectives. Several solutions have been suggested, but their effectiveness has not

been determined, nor is there really a clear understanding of what forms the conflict takes, and what part land-use regulation plays in the problem. (2) Need for reform of fiscal policy for local government. Although not strictly a land-use regulation problem, fiscal policy influences land-use regulations by distorting them so they are used incorrectly. (3) Need for technical and procedural improvement. This includes a wide variety of problems from research on standards to codification of controls to training of personnel. These problems relate more to the techniques of drafting and administering land-use regulations than to problems caused by a conflict between equally desirable goals. (4) Techniques to guide urban growth in the future. Change from lot-by-lot construction to mass production of housing requires new techniques for land-use regulations. The magnitude of urban growth clearly foreseeable for the future indicates the need for much bolder methods of government participation in urban development. (RC)

6. URBAN POLITICS IN THE SOUTHWEST

Main Investigator: Leonard E. Goodall.

Status of Research and Publications: In process. Completion expected February, 1967.

Agency: Arizona State University, Bureau of Government Research.

Previous Digest Report: None.

Research Problem. Conduct a comparative study of urban politics in ten southwestern cities: Wichita, Tulsa, Oklahoma City, Austin, Houston, San Antonio, Albuquerque, Phoenix, Tucson, and San Diego.

Method of Study. The study will include examination of governmental structure, voting patterns in city elections, roles of such groups as political parties, private interest groups, racial minorities, and the press. (LEG)

7. A PROFILE OF ARIZONA MAYORS AND COUNCILMEN

Main Investigator: Leonard E. Goodall.

Status of Research and Publications: In process. Completion expected February, 1967.

Agency: Arizona State University, Bureau of Government Research.

Previous Digest Report: None.

Research Problem. Provide biographical data on all Arizona mayors and councilmen who responded to a questionnaire (about 60% of the total). The data collected include place of birth, age when elected, previous experience in government, religion, activity in political parties, income, education, what officials like best about present positions, what they like least, and what motivated them to run. (LEG)

8. FACTORS IN ADJUSTMENT OF FAMILIES AND INDIVIDUALS

Main Investigator: Harold L. Nix.

Status of Research and Publications: In process.

Agency: Auburn University, Alabama Agricultural Experiment Station,
under sponsorship of U. S. Department of Agriculture.

Previous Digest Report: None

Research Problem. Determine the effects of personal and family characteristics, the socio-cultural structure, and certain situational factors, upon the social and economic adjustments of low-income rural families. Determine how these three groups of factors affect individuals and families in the social interaction process.

Method of Study. (1) Obtain and analyze primary and secondary data for selected characteristics of individuals and families. (2) Determine through field survey methods the socio-cultural structure, expectations, goals, and attitudes of selected groups of rural people. (3) Obtain and analyze primary and secondary data on national, regional, and local conditions, resources, and community organization as factors affecting adjustments. (4) Determine and analyze the patterns of behavior that emerge and determine the consequences of these processes on social and economic adjustments of rural people in low-income areas. (HLN)

9. HUMAN RESOURCE DEVELOPMENT AND MOBILITY IN THE RURAL SOUTH

Main Investigator: J. E. Dunkelberger.

Status of Research and Publications: A five-year study in process.

Agency: Auburn University, Agricultural Experiment Station, under
sponsorship of U. S. Department of Agriculture.

Previous Digest Report: None.

Research Problem. Determine the characteristics of and factors involved in human resource development and decision-making processes of people in selected stages of the life cycle. (1) Analyze changes in selected areas of human behavior: occupation; family structure, function, and resources; participation; attitudes and values. (2) Analyze factors and conditions involved in human physical and social mobility during a given period of time.

Method of Study. The study will involve recontacting the respondents to a sample taken earlier. A regional schedule will be developed. Both household heads and homemakers will be reinterviewed as well as other household members who have made significant changes in status since the first contact. In cases where one of the changes has been physical (spatial) migration, an effort will be made to contact them at their new locations. (JED)

10. TASK ALLOCATION AND STRUCTURE OF HEALTH RESOURCES

Main Investigators: Kermit K. Schooler, James F. Cummins, Carol E. Thometz, and Robert Morris.

Status of Research and Publications: In process.

Agency: Brandeis University, under sponsorship of U. S. Department of Health, Education, and Welfare.

Previous Digest Report: None.

Research Problem. (1) To compare various forms of organization of medical care with respect to the allocation and performance of medically relevant tasks. The comparison of different forms of organization of care is expected to reveal differences in degree of coordination and differences in allocation of tasks. (2) Determine which form of organization is most conducive to effective utilization of members of the health care team. Indicators of effectiveness of utilization will include the judged congruence between training for a task and its performance, amount of duplication of tasks, cost to patient in time and money, and adequacy of the distribution of medical and paramedical time per patient visit.

Hypothesis. Effective functioning of an organization for patient care is related to the structure of the organization. (JS)

11. CONCEPTIONS OF THREE MEXICAN CITIES AS HELD BY THEIR INHABITANTS

Main Investigator: David Stea.

Status of Research and Publications: In process.

Agency: Brown University, Graduate School, in cooperation with the Escuela Nacional de Arquitectura of the Universidad Nacional Autonoma de Mexico, under sponsorship of the Social Science Research Council.

Previous Digest Report: None.

Research Problem. Discover and describe how the inhabitants of three Mexican cities picture their cities, and delineate the factors which affect these conceptions.

Method of Study. Interview a (partly representative) sample of people in Mexico City, Puebla, and Guanajuato. The structures of these cities differ in various interesting ways.

Hypothesis. That images of these cities and their parts, as reflected in descriptions given and maps drawn by their inhabitants, will vary as a function of sex, class, length and mobility of residence, and the physical characteristics and traditions of the cities, themselves. (DS)

12. COMMUNITY DELINQUENCY CONTROL PROJECT

Main Investigators: Bertram M. Johnson and Carolyn B. Jamison.

Status of Research and Publications: In process.

Agency: State of California, Department of the Youth Authority.

Previous Digest Report: None.

Research Problem. (1) Provide statistical descriptions of the operation of the Community Delinquency Control Project. (2) Validate previously designed "workload" measures by means of time studies. (3) Evaluate the effectiveness of the CDCP program in terms of a ward's parole performance, if a satisfactory research design can be introduced.

Method of Study. Two parole units, each to supervise 100 wards, have been established in Los Angeles and Oakland. Wards are originally deemed eligible for CDCP if they are males between the ages of thirteen through seventeen, live in the project areas, and have not been committed to the Youth Authority for an offense involving violence. In addition, an assessment is made of the community's reaction, and if serious objections are made to the ward's release, he is declared ineligible. Some cases are rejected for various reasons related to judgment of treatment amenability. Wards deemed eligible are released directly to the project from the reception centers. Caseloads average fifteen wards per agent. The major treatment elements are: increased general supervision, intensive individual counseling, types of group counseling, activity groups, psychiatric and group work consultation, short-term custody for limit-setting, increased use of subsidized out-of-home placements, and regularly scheduled case conferences on each ward. (JS)

13. AN EVALUATION OF COMMUNITY TREATMENT FOR DELINQUENTS

Main Investigators: Marguerite Q. Warren, Theodore B. Palmer, James K. Turner, Loren W. Look, James McHale, and Arthur M. Dorsey.

Status of Research and Publications: In process. Phase I completed. Completion of Phase II expected in 1969. For information, contact Keith S. Griffiths, California Department of the Youth Authority, State Office Building No. 1, Sacramento 14, California.

Agency: State of California, Department of the Youth Authority.

Previous Digest Report: None.

Research Problem. Make a comparative assessment of institutional and community treatment for comparable groups of California Youth Authority wards.

Method of Study. (1) Demonstrate the feasibility of substituting an intensive community treatment program for incarceration of serious delinquents. (2) Develop a differential treatment model which defines nine subtypes of delinquents and predicts most effective treatment interventions for each subtype. In Phase II, elements of the experimental program and treatment model are being further described in an attempt to delimit the aspects of the program most related to success. A new experimental design is planned in which delinquents committed to the California Youth Authority from two large urban areas will be assigned at random to: (a) a community unit using the differential treatment model; (b) a community unit following the model of Empey's Provo Experiment; (c) the traditional institutional program. The three alternative programs will be compared as to effectiveness in reducing recidivism and eliciting attitudinal and behavioral changes in various delinquent subtypes.

In both Phases I and II, the target population consists of wards committed to the state by the juvenile courts, excluding those who represent a threat to the safety of the community. To date, 414 cases (160 experimental and 254 control) have been under study. Of this group, 230 cases (81 experimental and 149 control) have been followed in the community for a period of at least fifteen months.

Major Findings. Current figures show the experimental community group to have a higher success rate and tendencies toward more positive test score changes (delinquent attitudes) than the control, institutionalized group. In the fifteen month period of community exposure, 30% of the experimental cases and 46% of the control cases failed on parole. Thus far, none of the delinquent subtypes tend to do significantly better in the control group than do their corresponding subtypes in the community program. (MQW)

14. COMMUNITY CONTEXT OF DELINQUENT BEHAVIOR

Main Investigators: Joseph D. Lohman, Herman Schwendinger, and Julia Schwendinger.

Status of Research and Publications: In process.

Agency: University of California (Berkeley), School of Criminology, under sponsorship of U. S. Department of Health, Education, and Welfare.

Previous Digest Report: None.

Research Problem. Develop a comprehensive description of general adolescent life as well as the delinquent attitudes and behavior patterns which are typical in several Los Angeles communities.

Method of Study. Measure the social and ideological structures of adolescent communities in these Los Angeles areas. A variety of different measures of deviant behavior is being used to locate the types and incidence of illegal acts and persons in these structures. Data involving participant observation reports, responses to sociometric questionnaires and sociodramatic techniques, interviews, adolescent social type rating techniques, as well as data derived from official sources, are being used. (JS)

15. FUNCTIONAL RELATIONSHIPS OF JUNIOR COLLEGE ENVIRONMENTS AND SELECTED CHARACTERISTICS OF FACULTIES, STUDENTS, ADMINISTRATION, AND THE COMMUNITY.

Main Investigator: Vernon L. Hendrix.

Status of Research and Publications: In process.

Agency: University of California (Los Angeles), Department of Education, under sponsorship of U. S. Department of Health, Education, and Welfare.

Previous Digest Report: None.

Research Problem. It has been asserted that junior colleges are, in varying degrees, community colleges, deriving their goals, purposes, and functions largely from the characteristics of the community in which they operate. These community characteristics also define certain community needs, which the colleges meet by producing "outputs" consisting primarily of students possessed of selected knowledge, abilities, and skills. The objectives, then, of this study are: (1) Discover the manner and extent to which community characteristics (external determinants) are related to certain student knowledge and abilities (outputs). (2) Assuming that measurements of environmental press dimensions give an operational definition of goals, purposes, and functions of public junior colleges, discover the manner and extent to which environmental dimensions are related to external determinants. (3) Discover the manner and extent of relationship between environmental dimensions and the achievement of "outputs" by public junior colleges.

Method of Study. Secure three types of data from a sample of junior colleges: (1) measurements of environmental dimensions; (2) external determinants-indications of community characteristics (attitudes of students and faculty, economic, cultural, political, demographic, sociological, and financial characteristics); (3) various output indicators of the effectiveness with which colleges are meeting needs (success of transfers, employment rates, retention rates). Canonical analysis, factor analysis, general linear hypothesis analysis of variance, and multiple regression models can be employed to test for the presence of relationships within and among these sets of variables. (VLH)

16. LOS ANGELES SMOG CONTROL

Main Investigator: George A. Hoffman.

Status of Research and Publications: In process

Agency: University of California (Los Angeles), Institute of Government and Public Affairs.

Previous Digest Report: None.

Research Problem. To illustrate a systematic methodology for planning smog control.

Method of Study. The program presupposes that controlling air quality is a systems problem in which social, political, economic, and technical factors mingle inextricably. The study includes: (1) Compilation of a comprehensive catalog of the physical nature of Los Angeles smog. (2) Exhaustive documentation of the physiological and psychological effects of smog on the population. (3) Preparation of an actuarial account of the public losses attributable solely to air pollution in the region. (4) Compilation of possible control measures and their costs, ranging from present controls to hypothetical zero emission techniques. (5) Preparation of a cost-benefit analysis of control possibilities, based on the results from steps 3 and 4. (6) Derivation from step 5 of optimal policies and goals of control expenditures, control technology, and air-quality standards. (GAH)

17. A PROGRAM-BUDGETING SYSTEM FOR LOCAL GOVERNMENTS

Main Investigators: Werner Z. Hirsch, Harold Sommers, Marvin Hoffenberg, Eugene Loren, Eugene Devine, Morton Marcus, and Martin Katzman.

Status of Research and Publications: In process.

Agency: University of California (Los Angeles), Institute of Government and Public Affairs.

Previous Digest Report: None.

Research Problem. Study major problems that may arise as local governments begin to implement program-budgeting systems.

Method of Study. Establish working relationships with selected local governments on design, implementation, and decision-making problems. Simulate the process with public official participation to evaluate results and train officials. Analyze interrelationships in which program budget format will become important. Design standardized budget formats. Investigate general applicability of benefit-cost analysis. Specify and structure informational requirements for decision-making within program-budgeting framework. (WZH)

18. LOS ANGELES: AN INQUIRY INTO THE FUTURE OF ITS CULTURAL LIFE

Main Investigators: Jascha Kessler, William Hutchinson, and Jay Frierman.

Status of Research and Publications: In process.

Agency: University of California (Los Angeles), Institute of Government and Public Affairs.

Previous Digest Report: None.

Research Problem. A pilot study for a project to survey the disposition of cultural life in a city undergoing rapid urban development and metamorphosis--its problems and possibilities; determine the effects of "cultural explosion" on life of producers of art. (JK)

19. LAND PLANNING FOR AESTHETIC OBJECTIVES

Main Investigators: Lee Weisel and Jesse Dukeminier.

Status of Research and Publications: In process. Book manuscript in preparation.

Agency: University of California (Los Angeles), Institute of Government and Public Affairs.

Previous Digest Report: None.

Research Problem. A study of (1) the methods by which land use can be improved in terms of efficiency and beauty through better design; (2) the means by which government can encourage better land planning.

Method of Study. Particular emphasis is placed on the role of the federal government, analysis of federal tax paying power, spending programs, and participation in land use. Participants contacted were government officials at all levels, financiers, private developers, designers, and planners. (LW)

20. PLANNING EDUCATION TODAY FOR TOMORROW

Main Investigator: Werner Z. Hirsch.

Status of Research and Publications: In process.

Agency: University of California (Los Angeles), Institute of Government and Public Affairs.

Previous Digest Report: None.

Research Problem. A study of new socio-economic conditions and new possibilities for education innovations that might help meet the changes in urban life. It is an effort to identify goals and directions for education and to become aware of coming opportunities, problems and their potential solutions. The study will include formulation of education programs and development of efficient administration. (WZH)

21. FUTURE AUTOMOTIVE ENGINEERING, ELECTRICAL AUTOMOBILES, AND THEIR SOCIO-ECONOMIC IMPLICATIONS

Main Investigator: George A. Hoffman.

Status of Research and Publications: In process.

Agency: University of California (Los Angeles), Institute of Government and Public Affairs.

Previous Digest Report: None.

Research Problem. To anticipate advances and innovations that may occur in automotive technology during the next three decades.

Method of Study. Alternatives to the internal combustion engine and to energy storage in fossil fuels are being investigated through a design of electric automobiles. A preliminary listing of costs is included along with a study of various aspects of exhaust abatement, resource conservation, and other socio-economic implications of future automotive innovations. The study will survey the technical characteristics of automobiles today, and explore their probable advances thirty years hence. Electric passenger cars equivalent to conventional automobiles will be designed. The costs and benefits to consumers and the public, and effects on industry, transportation, clean air, and fossil fuel depletion will be noted. (GAH)

22. PSYCHOSOCIAL FACTORS IN HOUSING FOR THE AGED

Main Investigators: Daniel M. Wilner, Rosabelle Price Walkley, and Susan R. Sherman.

Status of Research and Publications: Phase I completed and findings published in Rosabelle P. Walkley, Wiley P. Mangum, Jr., Susan R. Sherman, Suzanne Dodds, and Daniel M. Wilner, Retirement Housing in California, Berkeley: Diablo Press, Box 7084. \$2.95 per copy. Phase II in process. First wave of interviews with 600 test respondents and 600 control respondents completed.

Agency: University of California (Los Angeles), School of Public Health.

Previous Digest Report: 12:2-14.

Research Problem. Phase I: To survey all types of special housing for the elderly in California. Phase II: To study the effects of several selected housing environments. (SRS)

23. THE MUNICIPALITY AS A WATER POLICY DETERMINING ENTITY

Main Investigator: W. W. Crouch.

Status of Research and Publications: In process.

Agency: University of California (Los Angeles), Water Resources Center, under sponsorship of U. S. Department of the Interior, Office of Water Resources Research.

Previous Digest Report: None.

Research Problem. In the southern California metropolitan areas, less than one-fourth of the cities have accepted water supply as a municipal function--although most of those that have undertaken it have become major centers of population and assessable wealth. Others have left the responsibility for water supply to mutual water companies, private utility companies, and municipal water districts (single-purpose districts). Changes in water

resource conditions in some areas, however, have induced a few cities to organize municipally administered systems in recent years. The project embraces three objectives: (1) Determine the factors that induced a selected number of southern California municipalities to organize municipal water supply systems. (2) Determine the relationship between these cities' annexation policies and their municipal water resources. (3) Determine and analyze the political group factors most influential in municipal decision-making with respect to use of a municipality's water resources. (JS)

24. THE ECONOMIC VALUE OF WATER QUALITY

Main Investigators: P. H. McGauhey and G. T. Orlob.

Status of Research and Publications: In process.

Agency: University of California (Richmond), Sanitary Engineering Research Laboratory, under sponsorship of Resources for the Future, Inc.

Previous Digest Report: None.

Research Problem. Develop and demonstrate a practical method of determining the appropriate degree of treatment to ascribe to each of several water purification processes in order to meet the quality requirements of various beneficial uses at a minimum of cost. Maintenance of the quality of the nation's water resources is a problem of increasing concern as a rapidly growing population requires more intensive use of a relatively fixed volume of water. Engineered systems utilized to augment natural self-purification processes are expensive and becoming increasingly so as the burden of pollution requires more and more sophisticated installations.

Method of Study. A mathematical model has been set up with the following variables: a stream with facilities for upstream flow regulation; a city discharging waste water with varying degrees of possible treatment; a reach of open stream subject to imposed quality standards, various beneficial uses, natural and controlled flow volume, and natural self-purification; a down-stream city utilizing the stream for domestic water supply after conventional water treatment. Computer techniques will first be utilized to determine the optimum degree of water treatment, under prescribed conditions of stream standards, which should be ascribed to the two cities to minimize the overall cost to the entire community. Later variation of all restraints will be studied to optimize the entire stream management regime for quality purposes from the standpoint of economics. (JS)

25. OBSTACLES TO SCHOOL INTEGRATION IN NEW YORK CITY

Main Investigators: David Rogers, Rosalyn Menzel, and Faith Korthauer.

Status of Research and Publications: In process.

Agency: Center for Urban Education, under sponsorship of U. S. Department of Health, Education, and Welfare.

Previous Digest Report: None.

Research Problem. To delineate and interpret the range of social forces that have served as obstacles to school integration.

Method of Study. Data are being obtained through informant interviews, observation at meetings and hearings, and study of published documents (reports, studies, press clippings). The main sites for field work include the Board of Education (and State Commission), interested public agencies, and community groups. This is intended to be a case study to generate hypotheses about conditions related to action or inaction by school officials. While New York City's problems are considered by some to be idiosyncratic, the purpose of this study is to interpret them in terms of social forces that operate in varying degrees in other cities as well. The study can be used as a "bench mark" for later studies. (DR)

26. THE NEIGHBORHOOD SCHOOL

Main Investigators: Herbert Gans and Joelle Adlerblum.

Status of Research and Publications: In process.

Agency: Center for Urban Education, Community Research.

Previous Digest Report: None.

Research Problem. To determine the future of the neighborhood school in urban areas, and particularly how the contradiction between it and the aim of quality integrated education should be resolved.

Study will examine the history of the neighborhood school in America, the role it plays in the residential neighborhood (which requires an analysis of the social structure of the neighborhood and its role in people's lives); the sources of and reasons for support and opposition to the neighborhood school at the present time, and the politics that have developed around the neighborhood school issue.

Method of Study. Review the literature on the neighborhood school and the neighborhood; conduct a field study of the neighborhood school in one or more neighborhoods. (FLM)

27. SHAPING OF MASS MEDIA CONTENT

Main Investigator: Herbert J. Gans.

Status of Research and Publications: Completion expected in 1967.

Agency: Center for Urban Education, Community Research Division, under sponsorship of the Bullitt Foundation.

Previous Digest Report: None.

Research Problem. Determine how the mass media develop the picture they present of contemporary American society.

Method of Study. Study how the media fashion their content, the criteria they use to do so, and the factors they consider in deciding what to select in reporting on the many aspects of American society. In its initial phases, the study will concentrate on the shaping of news and other informational content in selected national mass media, principally television and large circulation magazines. (HJG)

28. INTERACTION BETWEEN EDUCATION AND SOCIETY IN CHICAGO

Main Investigators: Robert L. McCaul, Robert J. Havighurst, and Elizabeth L. Murray.

Status of Research and Publications: In process. A final report is to be issued.

Agency: University of Chicago, School of Education, under sponsorship of U. S. Department of Health, Education, and Welfare.

Previous Digest Report: None.

Research Problem. Explore the relations between educational institutions of the Chicago metropolitan area and the economic and social forces of the community between 1925 and 1965.

Hypothesis. The schools have moved and are moving from a state of self-containment toward more and more interaction with other social institutions in the modern metropolitan area.

Method of Study. Public, private, and parochial schools and colleges will be studied. Twenty or more special studies will be conducted, including: development of schools and colleges in relation to population growth and distribution; higher education in the metropolitan area; teachers in Chicago schools; relation between the social welfare and educational agencies in Chicago; urban renewal, city planning, and the schools; and the development of parochial schools in the metropolitan area. (RLM)

29. IMPROVERS AND PRESERVERS: A HISTORY OF OAK PARK, ILLINOIS 1833-1940

Main Investigator: Arthur Le Gacy.

Status of Research and Publication: Completion expected January, 1967. To be submitted as a doctoral disseration.

Agency: University of Chicago, Department of History.

Previous Digest Report: None.

Research Problem. An historical study of how one suburb influenced and, in turn, was influenced by the Chicago metropolitan area. (AKC)

30. COMMUNITY AND PERSONAL FACTORS IN ADOPTION AND NON-ADOPTION OF FAMILY PLANNING SERVICES

Main Investigators: Donald J. Bogue, Thomas Crawford, Walter Mertens, and Daniel Ogilvie.

Status of Research and Publications: A three-year project in process.

Agency: University of Chicago, Department of Sociology, Community and Family Study Center, under sponsorship of U. S. Department of Health, Education, and Welfare.

Previous Digest Report: None.

Research Problem. Gather and provide information useful in accelerating adoption of fertility-limiting practices among low-literacy populations.

Method of Study. Develop a comprehensive system for evaluating a family planning program; evaluate the impact of family planning experiments; explain success and failure at the psychological level; conduct experiments to induce attitude change and behavior change in family planning "failures"; study community and institutional factors; study family factors in family planning. Research is being conducted at three sites: Chicago slums, rural areas in eastern Kentucky, and rural areas in central Alabama. (DJB)

31. NAVAHO URBAN RELOCATION IN DENVER

Main Investigator: Theodore D. Graves.

Status of Research and Publications: In process.

Agency: University of Colorado, Department of Anthropology, under sponsorship of U. S. Department of Health, Education, and Welfare.

Previous Digest Report: None.

Research Problem. Investigate the adjustment of Navaho Indian migrants to Denver, Colorado.

Method of Study. The major research strategy involves cross-sectional survey interviewing of migrants currently in Denver, former Denver migrants now back on the reservation, and a comparison group of young Navaho males who have never been to a city on relocation. This survey provides data on each migrant's background experiences in preparation for urban life, full job history, sociometric relationships, drinking behavior, psychosomatic symptoms, blood pressure and other aspects of the migrant's health record, English language skills, and a series of psychological measures including cultural

traditionalism, achievement orientation, time perspective, degree of fatalism, alienation, attitudes, personal values, and expectations about future achievement. Periodic reinterviewing of these same subjects is conducted. These data are supplemented with family case studies, employer interviews, and records from police and Bureau of Indian Affairs files. (TDG)

32. URBANIZATION OF THE MIGRANT

Main Investigators: Ozzie G. Simmons, Robert C. Hanson, William N. McPhee, Robert J. Potter, and Jules J. Wanderer.

Status of Research and Publications: In process. A four-year project in its third year. Programming of a computer model of urbanization processes in progress. The main report of the findings to be published as a book in 1968 or 1969. Publications to date include Norman R. Kurtz, "Gatekeepers in the Process of Acculturation," a doctoral dissertation; and Robert C. Hanson and Ozzie G. Simmons, "The Role Path: A Concept and Procedure for Studying Migration to Urban Communities," a paper presented at the 1966 meeting of the American Sociological Association. Both available in mimeographed form without charge.

Agency: University of Colorado, Institute of Behavioral Science, under sponsorship of the National Institute of Mental Health.

Previous Digest Report: 12:2-20.

Research Problem. To identify and explicate the social processes leading to successful or unsuccessful performance of normal roles in the urban environment by a rural migrant. The ultimate objective is to develop a model of urbanization processes with computer simulation of socialization experiences and subsequent performance of the migrant. Then postulated interventions by administrators can be simulated and consequences of planned policy changes observed. (RCH)

33. THE SOCIAL MECHANISM OF RURAL-URBAN WATER TRANSFERS

Main Investigators: L. M. Hartman, D. A. Seastone, and Willis Ellis.

Status of Research and Publications: In process.

Agency: Colorado State University, Department of Economics, under sponsorship of Resources for the Future, Inc.

Previous Digest Report: None.

Research Problem. Develop an economic analysis of the institutional and hydrologic problems of water allocation in the Western states. Emphasis is upon the problems of ownership transfers of existing supplies between competing uses.

Method of Study. (1) Analyze physical interdependencies pertaining to quality effects and return flows under stochastic river flow situations in terms of property right concepts and transfer rules. (2) Conduct a conceptual and empirical analysis of income interdependency, external effects, considering both the recipient and losing sectors of local economies. (3) Examine the feasibility of implementing economically efficient transfer rules and procedures in terms of legal precedent, attitudes, and values of public groups, considering the fact that efficiency and public good may be accomplished by a variety of legal devices and organizations. (LMH and DAS)

34. CONSENSUS ON EDUCATIONAL GOALS BETWEEN SCHOOL AND COMMUNITY

Main Investigators: Allen H. Barton and David Wilder.

Status of Research and Publications: In process.

Agency: Columbia University, Bureau of Applied Social Research, under sponsorship of U. S. Department of Health, Education, and Welfare.

Previous Digest Report: None.

Research Problem. (1) Investigate the correlates of parents' and educators' interests, perceptions, expectations, and support of educational practices and goals. (2) Determine the degree, and the causes and consequences, of accurate interpersonal perceptions between parents and educators with respect to teaching and other socialization goals and practices. (3) Determine the degree, and the causes and consequences, of role consensus between parents and educators. (4) Determine the major contextual features of the community which affect school-community relationships, including interpersonal perceptions and role consensus.

Method of Study. Eleven school attendance areas in New Jersey, including one city, four suburbs, two small towns, and one rural area were selected. Respondents were all teachers in the elementary schools selected, elementary principals, superintendents, and mothers of children receiving instruction from two teachers in each of the three grade levels in the same school in each district. Data collection was by interviews with mothers, teachers of their children, and school administrators. Educators also filled out questionnaires for supplemental information. Parallel items concerning interpersonal perceptions and role consensus were administered to all educators and parents. Analysis will be multivariate in order to isolate social processes. Indices of accuracy of interpersonal perceptions, role consensus, and conformity to self-and other-expectations will be devised as measures of major dependent variables. These will be related to such independent variables as parental aspirations, methods of teaching, parents' socialization procedures, educational ideologies, class variables, structural features of school-community communication, and contextual features of the communities. (AHB)

35. AN INFORMATION SYSTEM FOR COMMUNITY HEALTH SERVICES

Main Investigator: Vergil N. Slee.

Status of Research and Publications: In process. Broad preliminary analysis completed and two aspects of the program, Nursing and Environmental Health, explored extensively.

Agency: Commission on Professional and Hospital Activities (Ann Arbor, Michigan), in cooperation with the Washtenaw County Health Department, under sponsorship of the U. S. Department of Health, Education, and Welfare.

Previous Digest Report: None.

Research Problem. Develop a computerized information system which will provide participants with a convenient reference to many pertinent aspects of community health services. The objective is to collect and report information once and have the electronic computer system process, compile, rearrange, and report the information in as many different ways as might be useful.

Method of Study. The principal areas of investigation center on public health nursing services, with particular emphasis on home nursing care for the chronically ill and aged; on medical, dental, laboratory services needed to prevent, detect, treat diseases, or to serve aged or chronically ill persons. Other areas include environmental hygiene, vital statistics, control of infections, and the utilization of public health personnel (time), resources, and facilities. A prototype system has been running on the Commission's electronic computer with a variety of reports being produced for and used by the County. Further refinements have been made and are now being introduced into the integrated information system. (JMP)

36. EFFECTS OF COMMUNITY STRUCTURE ON SCHOOL DECISIONS

Main Investigators: Irving L. Allen, J. David Colfax, and Henry G. Stetler.

Status of Research and Publications: In process.

Agency: University of Connecticut, under sponsorship of U. S. Department of Health, Education, and Welfare.

Previous Digest Report: None.

Research Problem. To identify the antecedents, dynamics, and consequences of de facto school segregation in five medium-sized Connecticut cities.

Method of Study. Patterns of segregation in the five communities are identified in their historical, ethnic, demographic, ecological, and economic contexts. Sources of school segregation are examined in terms of their relative contribution to the existing patterns and their significance as sources of change. Five major areas are investigated: the economy, the polity, the integrative systems, the school-neighborhood-associational complex, and the family. Consequences of the patterns are identified by testing student achievement and ability, mobility aspirations, attitudes toward and valuation of education, and intergroup attitudes and contacts. (ILA, JDC, and HGS)

37 EFFECTS OF SUBURBANIZATION ON LAND-USE PATTERNS WITH EMPHASIS ON THE ROLE OF ZONING ORDINANCES

Main Investigator: Robert L. Leonard.

Status of Research and Publications: In process.

Agency: University of Connecticut, Agricultural Experiment Station, under sponsorship of U. S. Department of Agriculture.

Previous Digest Report: None.

Research Problem. (1) Identify the intent of zoning ordinances and the major socio-economic variables influenced by particular zoning regulations. (2) Relate the effects of zoning actions on residential, commercial, agricultural, and industrial development and to changes in local public finance. (3) Estimate how changes in zoning regulations will contribute to alternative patterns of development and to community improvement.

Method of Study. Several towns in the Hartford area are being studied. The intent of zoning is determined by examining local reports, ordinances, and records, and by interviewing local officials. Data is collected on the number, purpose, and results of requests for rezoning and appeals for variances. Within subareas of each town, detailed analysis is made of changes in land use, property values, taxes, and zoning. The interaction of these variables within each subarea will be examined for significant relationships. (JS)

38 THE GROWTH AND DEVELOPMENT OF MANUFACTURING INDUSTRIES IN CONNECTICUT

Main Investigators: Sidney Turoff and William N. Kinnard, Jr.

Status of Research and Publications: In process.

Agency: University of Connecticut, School of Business Administration, Center for Real Estate and Urban Economic Studies.

Previous Digest Report: None.

Research Problem. (1) Evaluate the growth and development of the manufacturing sector of Connecticut's economy, measured against national and regional growth standards. (2) Determine to what extent "under-utilization" of advanced technology can explain any relative and/or absolute decline of certain industries in Connecticut. (3) Develop a simple, low-cost analysis technique capable of identifying future potential problem areas in the state's manufacturing economy. (ST)

39. RECREATIONAL SPACE STANDARDS OF CORE CITIES AND REGIONS

Main Investigators: Jay S. Shivers, Hollis Fait, and William N. Kinnard, Jr.

Status of Research and Publications: Preliminary report to be issued fall of 1966. Completion expected by fall of 1967.

Agency: University of Connecticut, School of Business Administration, Center for Real Estate and Urban Economic Studies.

Previous Digest Report: None.

Research Problem. To produce a valid, precise, and reliable standard by which any incorporated local or regional governmental unit may determine the amount, kinds, and placement of recreational sites needed to meet present and future requirements of the people comprising their respective permanent and transient populations.

Method of Study. Development of time, motion, and space studies of people performing the full range of recreational activities demanding area in the outdoors. Cinematographic techniques are employed on a systematic time basis to record the intensity and type of use of recreational facilities. Based on the observations provided, inferences and conclusions about the standards and criteria for effective utilization of a recreational space will be developed. (JSS)

40. SHORT RANGE HOUSING ANALYSIS: SOUTHEASTERN CONNECTICUT PLANNING REGION

Main Investigators: William N. Kinnard, Jr., B. E. Tsagris, and Stephen Messner.

Status of Research and Publications: In process. Completion expected by September, 1967.

Agency: University of Connecticut, School of Business Administration, Center for Real Estate and Urban Economic Studies.

Previous Digest Report: None.

Research Problem. Project housing needs and problems of the Southeastern Connecticut Planning Region to 1975, and identify the appropriate action programs to meet these needs.

Method of Study. A detailed investigation of the economic, social, demographic, and financial characteristics of the Southeastern Region will precede the actual analysis of housing data. Then, a detailed analysis will be made of the current housing situation including (but not restricted to) consideration of: (1) Demand for housing: population, employment, incomes, housing needs, public governmental pressures. (2) Supply of housing: units, constructions, demolitions, public/private distribution. (3) Indication and evaluation of current needs: demand-supply gaps, market gaps (including financing), public or special programs, public controls, public facilities. Based upon the analysis of the current housing situation, projections for demand and supply will be made to 1975. Problems of meeting present and projected housing needs will be identified and analyzed. The analysis will include recommendations for action relating to: (1) Stimulation of private investment - development. (2) Broadening the base of lending through savings-financing activities. (3) Public housing programs and federally aided programs of assistance to provide needed community facilities. (4) Federal programs of assistance to provide needed community facilities. (5) Changes in planning, zoning, and subdivision regulations. Much of the work will be performed in the field in the Southeastern Connecticut Planning Region. (WNK, Jr.)

41. COMMERCIAL AND MULTI-FAMILY APARTMENT DEVELOPMENT IN A RURAL, ISOLATED, UNIVERSITY-DOMINATED COMMUNITY

Main Investigators: William N. Kinnard, Jr., B. E. Tsagris, and Stephen D. Messner.

Status of Research and Publications: Completion expected October, 1966.

Agency: University of Connecticut, School of Business Administration, Center for Real Estate and Urban Economic Studies, with support from the University President's Discretionary Fund.

Previous Digest Report: None.

Research Problem. Emphasizing the peculiar aspects of a University-dominated rural and isolated community, this study seeks to identify and analyze the peculiar demand and marketability characteristics of the markets for commercial-retail space and for apartments.

Method of Study. An intensive series of investigations into the ingredients of the local market will be conducted, including (but not restricted to) an analysis of population change, employment, incomes, shopping habits, commuting patterns. Interviews and questionnaires will be utilized, together with an analysis of data developed for the market area both by the University of Connecticut study group and other agencies. Emphasis will be placed upon the feasibility of development in terms of private investment and financing.

Findings for the Storrs market will be compared with those for similar types of markets throughout the United States where such studies are known to have occurred. These findings will also be compared with more typical patterns of characteristics found in commercial-retail and apartment markets throughout Connecticut. (WNK, Jr.)

42. LOCAL GOVERNMENT INTEGRATED DATA SYSTEM

Main Investigator: Myron Weiner.

Status of Research and Publications: In process.

Agency: University of Connecticut, Institute of Public Service, under sponsorship of the International City Managers' Association.

Previous Digest Report: None.

Research Problem. Development of the conceptual bases for an integrated data system for local governments. Recognizing the increasing use of computer technology by municipalities for record keeping operations, the research is designed to prepare a developmental plan which will guide local governments into the use of this technology for informational, planning, control, and management purposes as well as operational uses.

Method of Study. The research is being conducted by a team of 17 officials from the Greater Hartford area under the guidance of the research director. The members are local government management officials and professionals in the major local government functional fields: city management, finance, police, fire, public works, recreation, planning, redevelopment, education, and assessment. The project also includes applications of each function most appropriate for computer technology and relates each application to a phase of the developmental model planned for the creation and growth of the integrated system. (MW)

43. IMPACT OF ELECTRIC TOWER LINE RIGHTS OF WAY ON AFFECTED RESIDENTIAL PROPERTIES

Main Investigators: William N. Kinnard, Jr. and G. Ross Stephens.

Status of Research and Publications: Completed. Findings published in Volume 1 (with appendices in Volume II). Transmission Line Rights of Way and Residential Values, October, 1965, Institute of Urban Research, University of Connecticut.

Agency: University of Connecticut, Institute of Urban Research, under sponsorship of Connecticut Light and Power Co. and Hartford Electric Light Co.

Previous Digest Report: 12:1-51.

Research Problem. To discover what effect, if any, acquisition of rights of way for electric transmission tower lines has on the value of residential properties traversed or abutted by such tower line rights of way.

Major Findings. (1) The value of most residential properties is neither appreciably nor measurably affected adversely by adjacency to or intersection by overhead electric transmission line rights of way. (2) Such negative impact as is experienced is almost exclusively translated into larger lot sizes for abutted and impacted properties. (3) Larger lot size is a form of negative impact on two counts. First, more realty tends to sell for the same price when developed properties are involved. Secondly, fewer lots may be developed on acreage that is intersected by a tower line right of way. This means a reduction in potential profit to the builder-developer. (4) The width of the right of way does have an effect on acreage suitable for development in that it tends to reduce the number of lots which may be developed as it increases. (5) With respect to acreage suitable for residential development, when compensation for acquisition of a tower line right of way is made to the owner in an amount essentially equivalent to the total value of the acreage taken, no further damages to the remainder may normally be anticipated. (6) There is some deterrent to purchase and/or occupancy of residences near a tower line right of way for a minority of individual householders. (7) For home owners and occupants of residential properties, consideration of aesthetics and other living amenities are extremely important forces in such negative reactions as they have. In particular, visual and auditory impacts of nearby tower lines appear to be much greater detractions from market value than actual physical proximity to the right of way. (8) Anticipation of living in proximity to a tower line right of way is much worse than the actuality. (9) Intersected and abutted properties are about equally affected, which means that operational proximity rather than legal restrictions of use is the most important consideration to the individual property owner or purchaser. (10) Proximity to a tower line is not nearly so important to buyers and home owners as are other locational or amenity considerations. (11) The attitudes of those who may, and often do, influence residential property sales are generally more negative than the facts of the market place would warrant. (12) A clear-cut necessity exists to reconcile the evidence of the market place with the attitudes of those who may influence residential real estate transactions. (WNK, Jr.)

44. PROGRAM IN ENVIRONMENTAL QUALITY MANAGEMENT

Main Investigator: Walter R. Lynn.

Status of Research and Publications: In process. A pilot program in environmental systems analysis was formally established in 1965. Since that time, Cornell University has been actively engaged in developing a comprehensive interdisciplinary approach to environmental health. What has evolved is a program in environmental quality management that brings together the Cornell College of Medicine and the various colleges and schools in Ithaca to study environmental health in both urban and rural settings.

Agency: Cornell University, under sponsorship of U. S. Department of Health, Education, and Welfare.

Previous Digest Report: None.

Research Problem. In response to the complex and challenging problems associated with the deterioration of environmental quality, this project proposes to develop methods of forecasting the probable effects of various innovations on man's environment and upon man's health and welfare so that public policy makers will be better able to manage the environment to maximize its beneficial effect upon the members of society.

Method of Study. The scientific aspect of environmental quality management, the study's primary interest, concerns the analysis and measurement necessary to make optimal public policy decisions for the control of the environment. Engineering and the biological, physical, and social sciences provide the foundations of our understanding of the environment. The methods of the management sciences such as systems analysis, operations research, computer science, and statistical inference provide the quantitative methods for analyzing the various components of the problem. (WRL)

45. THE EFFECT OF URBAN INDUSTRIAL EXPANSION ON NEW YORK AGRICULTURE

Main Investigator: Emmitt F. Sharp.

Status of Research and Publications: In process.

Agency: Cornell University, Agricultural Experiment Station, under sponsorship of U. S. Department of Agriculture.

Previous Digest Report: None.

Research Problem. To relate urban and industrial expansion to changes in New York agriculture.

Method of Study. To analyze: (1) growth, composition, and distribution of New York State population in terms of intra-regional similarities and differences and the population trends affecting rural life in the state and the Northeastern Region; (2) rural-urban migration patterns and their relation to work opportunities, manpower needs, and the level of living in New York State and the region; (3) migration and other population change in relation to such selected factors as family life, community organization, cooperative extension services, other public land services, land use, and taxation. Also, to indicate some major implications of present and projected population trends for New York State and the Northeast.

Statistical measures of urbanization and industrialization (or a combined measure) are used on a county area basis to serve as key variables. These measures are to be related to characteristics and changes in characteristics of farms and farm families in New York. Data for the study is

primarily from census and vital statistics reports. A uniform plan of tabulation and classification is being followed to permit compilation of regional or subregional reports from analyses carried on in the separate states of the Northeast region (JS)

46. SOCIAL AND ECONOMIC CONSEQUENCES OF CHANGES IN EMPLOYMENT UPON SELECTED NORTHEASTERN COMMUNITIES

Main Investigator: C. Harold Brown.

Status of Research and Publications: In process.

Agency: University of Delaware, Agricultural Experiment Station, in cooperation with the Division of Urban Affairs, under sponsorship of U. S. Department of Agriculture. This study is parallel to one being conducted at the University of Maine, Item 91, page 53.

Previous Digest Report: None.

Research Problem. (1) Determine the consequences of changes in employment upon the social and economic organization of selected communities in the Northeast Region. (2) Analyze and publish data from the prior Northeast Regional Project.

Method of Study. Study a community that has substantially increased its labor force in recent years, investigate the adjustments made by a community which has had a substantial loss in employment, and for comparative purposes, examine a community which has experienced little change in recent years. Special attention will be given to ascertain the relevance of these findings to community planning. (JS)

47. HYDROLOGIC EFFECTS OF URBANIZATION

Main Investigator: Irwin Remson.

Status of Research and Publications: In process.

Agency: Drexel Institute of Technology, under sponsorship of National Science Foundation, Division of Engineering.

Previous Digest Report: None.

Research Problem. To appraise the hydrologic changes caused by rapid urbanization of large areas, their magnitude and effects, and determine and evaluate possible remedial actions.

Method of Study. Mathematical models simulating regional hydrologic functioning are being used. A suitable rural area serves as the prototype for the models. These models are prepared for ground-water, soil-moisture, stream, and other hydrologic systems. It is hoped that they can be combined

into an integrated model describing all phases of the hydrologic functioning of any area. The models are being used to determine the hydrologic effects of different patterns of urbanization suggested by specialists in city planning. Also, they will be used to determine appropriate remedial action to alleviate undesirable hydrologic effects of urbanization. (JS)

48. TWIN CITIES METROPOLITAN TAX STUDY

Main Investigator: Oscar F. Litterer.

Status of Research and Publications: The principal research and a preliminary draft of the analysis completed. Study being prepared for limited publication.

Agency: Federal Reserve Bank of Minneapolis, under sponsorship of the Dayton Company, Minneapolis, Minnesota.

Previous Digest Report: None.

Research Problem. (1) Examine the real and personal property taxes levied in the seven counties of the Twin Cities metropolitan area and suggest improvements in their administration. (2) Estimate the yield of non-property taxes--retail sales, gross income, gross earnings, amusement and admission, and consumers' utility taxes--by county and by municipality (of 2,500 inhabitants or more). (3) Determine the feasibility of imposing one or more of these taxes in the Twin Cities metropolitan area. (4) Examine methods of distributing non-property tax revenue among municipalities other than origin of collection, and consider the feasibility of administering a few governmental services on a metropolitan-wide area.

Method of Study. The probable yield of these taxes was based on data from the U. S. Bureau of the Census, from state and local governmental offices, and from local business firms. The feasibility of imposing non-property taxes in the Twin Cities area was appraised largely from a review of the experience local jurisdictions in the United States and Canada have had with them. Resident population, public school attendance, and real property valuation were studied as formulae for distributing non-property tax revenues among municipalities. An alternative to the problem of distributing non-property tax revenue among municipalities was the formation of a metropolitan area government to administer some governmental functions area-wide. (OFL)

49. THE CRITICAL FACTORS AFFECTING LOCAL DECISION-MAKING ON SCHOOL FISCAL POLICY

Main Investigators: R. L. Johns and Ralph B. Kimbrough.

Status of Research and Publications: In process.

Agency: University of Florida, Department of Educational Administration and Supervision, under sponsorship of U. S. Department of Health, Education, and Welfare.

Previous Digest Report: None.

Research Problem. Investigate the interrelationships of socio-economic factors, educational leadership, and community power structure, and the relationship of these factors to elasticity of local demand for education and to local financial effort in relation to ability.

Method of Study. The following questions will be considered: (1) Have most school districts in selected states followed relatively consistent patterns of local school fiscal policy? (2) What socio-economic factors are associated with effort in relation to ability and elasticity of demand? (3) Have unusual changes in fiscal policy occurred through time in school districts in selected states? (4) Are such factors as social power exchanges, economic changes, and educational leadership activities related to changes in local school fiscal policy? (5) What relationships do the characteristics of community power structure have with the level of local financial effort? (6) What relationships do the characteristics of educational leadership have with observed variations in effort? (7) How are certain civic beliefs among the population, power wielders, and teachers in selected school districts related to financial effort? (RLJ and RBK)

50. ECONOMICS OF WATER AND SEWER REGULATION IN BREVARD COUNTY, FLORIDA

Main Investigators: Richard L. Wallace and Robert M. Griffin, Jr.

Status of Research and Publications: In process. Completion expected in 1967.

Agency: Florida State University, Department of Economics, and the Urban Research Center, under sponsorship of Ford Foundation.

Previous Digest Report: None.

Research Problem. The project, concerned with water and sewer regulation in Brevard County, Florida, will examine: (1) the current status of regulatory law in Florida; (2) practices in the more highly urbanized sections of Florida; (3) the theoretical basis for determining utility rates; (4) and the implications of different policy alternatives for the economy of Brevard County. With rapid urbanization, it is necessary in many areas to provide utility services through the organization of small service districts by private enterprise. As urbanization proceeds, problems of public health, rates, adequacy of service, replacement of equipment occur and result in demands upon county government. These demands upon county government can be viewed as one of many responses of urban populations to problems arising from the accumulation of ad hoc provision for service. The county's response to these demands is significant as an indication of its capacity to base action on long-range planning. (RMG, Jr.)

51. ECONOMICS OF SMALL CITIES

Main Investigators: Robert M. Griffin, Jr., Zarko G. Bilbija, and Charles M. Grigg.

Status of Research and Publications: In process. Completion expected in 1968.

Agency: Florida State University, Institute for Social Research, under sponsorship of International City Managers' Association.

Previous Digest Report: None.

Research Problem. Describe the best available theory for economic development in cities under 10,000 population in non-metropolitan regions. These cities are confronted with problems of economic development as population and economic activities are attracted to metropolitan regions. The study will also experiment with use of community education to promote adoption of realistic and effective developmental policies.

Method of Study. The work will be performed primarily at the Urban Research Center (2323 South Washington Avenue, Titusville, Florida). Techniques of adult education and of evaluative survey research will be used to assess the possibilities of use of economic theory to orient communities toward economic development policies. (RMG, Jr.)

52. DOWNTOWN DEVELOPMENT STUDY

Main Investigators: Robert M. Griffin, Jr. and David R. Godschalk.

Status of Research and Publications: In process. Completion expected in 1967.

Agency: Florida State University, Institute for Social Research, under sponsorship of Ford Foundation.

Previous Digest Report: None.

Research Problem. Study the deterioration of a downtown in the midst of a region undergoing rapid urbanization and provide assistance to the community. The urbanization is accompanied by changes in the characteristics of population and the social orientation to the community as a result of the expanded space effort at Cape Kennedy, Florida.

Method of Study. Analyze activity patterns of households in the Titusville community; analyze the action processes which result in community development. Techniques of survey research and participant observation are employed. (RMG, Jr.)

53. THE PLANNING PROCESS IN EAST-CENTRAL FLORIDA

Main Investigators: Charles M. Grigg, Robert M. Griffin, Jr., Pauline E. Council, T. J. Cook, and David R. Godschalk.

Status of Research and Publications: In process. Completion expected in 1968-69.

Agency: Florida State University, Institute for Social Research, Urban Research Center, under sponsorship of Ford Foundation.

Previous Digest Report: None.

Research Problem. To assess the adequacy of planning initiated for the development of the rapidly urbanizing Cape Kennedy impact area of east-central Florida.

Method of Study. Factors to be considered include political attitudes, organizational and technical adequacies, communication and adult education programs, economic forces, and legal framework. Although analyses are being made at various levels, major emphasis is upon planning at the regional (seven-county) level. Survey and participant observation techniques are being used. (CMG)

54. ECOLOGY OF SOCIAL VARIABLES AMONG THE NEGRO POPULATION

Main Investigator: T. Stanton Dietrich.

Status of Research and Publications: In process.

Agency: Florida State University, Institute for Social Research and Sociology Department, under sponsorship of Ford Foundation.

Previous Digest Report: None.

Research Problem. Study and analyze the social variables among the Negro population.

Method of Study. The project proceeds on the premise that social characteristics (income class, educational status, occupation, etc.) are selective with respect to size and type of residence. Since the social variables also are related to racial factors, race will be controlled by studying only the 1960 Negro population with age and sex controls subsequently introduced. Independent variables will be the broad urban and rural residential areas subdivided by population size. In addition to the ecological factor of rural-urban classification, regional differences will be investigated. Appropriate statistical techniques will be employed to measure association and the significance of observed differences. Data used will be from The National 1/1000 Sample obtained from The Bureau of the Census. (TSD)

55. RELATIONSHIP BETWEEN CHARACTERISTICS OF INDIVIDUALS AND CENSUS TRACTS

Main Investigator: Albert Lewis Rhodes.

Status of Research and Publications: In process. Completion expected during fall of 1966.

Agency: Florida State University, Department of Sociology. This study is related to an earlier one sponsored by the Social Science Research Council.

Previous Digest Report: None.

Research Problem. This study is restricted to describing residential segregation by income.

Method of Study. Examine the relationship between individual income and median income of the census tract in which the individual resides, taking into account his occupation, his wife's educational attainment, and the number of children in the family. The analysis is based upon data collected in connection with a U. S. Public Health Service research grant to Dr. Otis Dudley Duncan, University of Michigan (Ann Arbor), 1962. These data are limited to white married couples, spouse present, living in the twelve largest cities of the United States. (ALR)

56. DEVELOPMENT OF TOURISM IN THE COASTAL PLAINS AREA

Main Investigators: William B. Keeling, Lawrence F. Pinson, John R. Thompson, and Polly W. Hein.

Status of Research and Publications: In process. Completion expected in 1967.

Agency: University of Georgia, College of Business Administration, Bureau of Business and Economic Research, and the Institute of Community and Area Development, under sponsorship of Coastal Plains Area Planning and Development Commission.

Previous Digest Report: None.

Research Problem. To discover ways of developing facilities and programs which will stimulate activity in the vacation/recreation industry in the Coastal Plains Area (Berrien, Brooks, Cook, Echols, Lanier, Irwin, Lowndes, Tift, and Turner counties).

Method of Study. In the nine counties of this planning and development area, all facilities, programs, and events which attract tourists are being surveyed and catalogued. The numbers of tourists visiting the area will be estimated as will the number merely passing through. Attractions tourists visit will be enumerated. The economic impact on travel-serving firms and the whole area will be estimated. Things that can be developed into attractions, opportunities for enterprises

to serve tourists, and programs of activity which could entertain tourists are being sought and outlined. However, the feasibility of discovered possibilities is not being studied. The information and suggested developments will be issued as a report. Educational meetings will then be held in each of the counties to further insure that developmental possibilities are well known in the area.

The work is being conducted through extensive literature review, field interviews, field observations, and statistical analyses of highway and economic data from interviews. Additional data will be obtained from local governments, the State Department of Industry and Trade, and the Georgia Department of Revenue and the State Highway Department. (JS)

57. DEVELOPMENT OF TOURISM IN THE GEORGIA MOUNTAINS AREA

Main Investigators: Lawrence F. Pinson, William B. Keeling, John R. Thompson, and Polly W. Hein.

Status of Research and Publications: In process. Completion expected in 1967.

Agency: University of Georgia, College of Business Administration, Bureau of Business and Economic Research, and Institute of Community and Area Development, under sponsorship of Georgia Mountains Area Planning and Development Commission.

Previous Digest Report: None.

Research Problem. To discover ways of developing facilities and programs which will stimulate activity in the vacation/recreation industry in the Georgia Mountains Area (Union, Towns, Rabun, Lumpkin, White, Habersham, Stephens, Dawson, Forsyth, Hall, Banks, and Franklin counties). This is a parallel study to Item 56 above. The plan and method of study are the same.

58. DEVELOPMENT OF TOURISM IN THE CHATTAHOOCHEE-FLINT AREA

Main Investigators: Lawrence F. Pinson, William B. Keeling, John R. Thompson, and Polly W. Hein.

Status of Research and Publications: In process. Completion expected in 1968.

Agency: University of Georgia, College of Business Administration, Bureau of Business and Economic Research, and Institute of Community and Area Development, under sponsorship of the Chattahoochee-Flint Area Planning and Development Commission.

Previous Digest Report: None.

Research Problem. To discover ways of developing facilities and programs which will stimulate activity in the vacation/recreation industry in the Chattahoochee-Flint Area (Carroll, Coweta, Heard, Harris, Talbot, Troup, and Meriweather counties).

This is a parallel study to Items 56 and 57 on page 32. The plan and method of study are the same. (JS)

59. SURVEY OF RECOMMENDED GOVERNMENTAL STUDIES IN THE ATLANTA METROPOLITAN AREA

Main Investigators: Morris W. H. Collins, Picot B. Floyd, and Frank Rich.

Status of Research and Publications: Completion expected November 1, 1966.

Agency: The University of Georgia, Institute of Government, under sponsorship of Local Government Commission of Fulton County, Georgia.

Previous Digest Report: None.

Research Problem. Provide the Local Government Commission of Fulton County (Atlanta), Georgia with a clear determination, based on reconnaissance surveys, of major governmental studies that should be undertaken in the Atlanta Metropolitan Area. Findings will be the basis for recommended state enabling legislation to carry out the major governmental studies delineated by the survey.

Method of Study. Inventory and analyze all studies completed or in progress in SMSA, and judge adequacy of research in each problem area; establish priorities for study; determine agencies and organizations capable of carrying out high-priority studies; estimate costs of high-priority studies where no clear means of support exist; prepare final report for Commission to state legislature. Survey will involve Atlanta leadership and Commissioners. Research will be conducted both in Atlanta SMSA and at the University of Georgia (Athens). (MWHC)

60. OAHU TRANSPORTATION STUDY

Main Investigators: Research and Engineering staff.

Status of Research and Publications: In process. Study is in the first half of its fourth year. Earlier material being updated and revised for completion of a land-use model in preparation for production of a traffic model. Completion expected August, 1967. Reports published periodically, including Trip Production and Attraction, June, 1966.

Agency: State of Hawaii, Department of Planning and Economic Development, in cooperation with the State Department of Transportation, and City and County Departments of Traffic and Planning, under sponsorship of U. S. Department of Housing and Urban Development.

Previous Digest Report: None.

Research Problem. To investigate transportation problems and requirements, and related socio-economic factors in order to forecast demands of and develop a suitable transportation system for Oahu. Oahu's rapidly increasing population, its expanded economy, coupled with its increasingly strategic location but limited land area and variant topography, pose an urgent and complex challenge in the development of a suitable transportation system. From a population of 50,000 in 1897, the population of Oahu had grown to 525,000 by 1961. Another 100,000 has been added since then. Forecasts indicate that the population will exceed 700,000 by 1970, and reach 1.1 million by 1990.

Method of Study. Land-use and traffic surveys are coordinated and studied with the use of computerized equipment. Findings are analyzed by statisticians, traffic engineers, economists, and planners. Private consultants are under contract to analyze results of findings in the mass transit phase of the study. Data collection, coding, and processing are carried out by survey personnel.

Major Findings. Use of public transportation has declined rapidly and use of automobiles increased. In 1960, Honoluluans made approximately 1-1/4 million trips on Oahu on an average weekday. More than half were made by automobile drivers and more than a third by passengers in an automobile. The 1960 Origin-Destination study by the State Department of Transportation reveals that on an average weekday, more than three-fourths of the trips made by persons begin or end at place of residence. Although only 12.1% of the total home-based trips were by transit, nearly nine out of ten were found to begin and end at home. Work and social-recreational travel constituted the most important trip categories. With the exception of work and school trips, less than 7% of each remaining trip category relied upon transit as a means of transportation. Although school trips represent less than 8% of the total trips, their reliance on transit in number and percentage are significant. (EG)

61. HIGHWAY DRAINAGE CHANNELS

Main Investigator: Not reported.

Status of Research and Publications: In process. Report to be published by Highway Research Board upon completion of project.

Agency: Highway Research Board, through contract with University of Minnesota, St. Anthony Falls Hydraulic Laboratory.

Previous Digest Report: None.

Research Problem. Develop a new design or designs to control erosion in roadside drainage channels. Often, a grass cover for such channels is sufficient. Where severe conditions prevail, paved channels or pipe flumes are used. Acceptable procedures have been developed for both such designs. However, information regarding the design of channels for intermediate conditions is not adequate. The development of intermediate design procedures will be the major objective of this project.

Method of Study. The procedure will include as variables, where appropriate, the discharge, the slope, shape, and alignment of the channel; the vegetal cover; the soil type, and the characteristic of the gravel or crushed rock lining. In addition, the final design or designs must be compatible with highway safety. (DHB)

62. EFFECTS OF DE-ICING CHEMICALS ON VEGETATION AND WATER

Main Investigator: Not reported.

Status: A five year project in process.

Agency: Highway Research Board, through contract with Virginia Polytechnic Institute, Virginia Agricultural Experiment Station (Blacksburg, Virginia).

Previous Digest Report: None.

Research Problem. Although de-icing chemicals make highways safer in winter for motorists in the "snow belt" states, their use has attendant problems. The most pressing is the seemingly adverse effect de-icers have on flowers, shrubs, trees, and other vegetation near the pavement. This study seeks to learn how extensive the problem is and what steps will be necessary to eliminate it.

Method of Study. Determine the effects of salt (and irons) on foliage and other above-ground portions of plants, including the physiological effects of nutrient absorption and toxic symptoms; salt level tolerance of plants, and plant responses to salt concentrations on sand, loam, and clay soils. Review the "state-of-the-art" with recommendations for needed research into the effects of salts on water supplies for domestic, agricultural, and wildlife uses. (DHB)

63. HIGHWAY GUARDRAIL DESIGN AND WARRANT CRITERIA

Main Investigator: Not reported.

Status of Research and Publications: In process. Findings to be published as a report.

Agency: Highway Research Board, through contract with Cornell Aeronautical Laboratory.

Previous Digest Report: None.

Research Problem. To make a preliminary investigation of the highway guardrail as a means of providing the motorist with more protection. Accidents involving single vehicles veering off the road continue to make up an increasingly greater percentage of the total number of highway accidents each year. The highway designer is looking more and more to the guardrail as a possible means of affording protection.

Method of Study. Examine past and current research concerned with: (1) rational reasons for installing guardrails; (2) how to determine prevailing conditions of off-road vehicle motions and impact with barriers on various types of highways; and (3) how to determine guardrail structural design criteria. The study will also define additional needed research and outline a tentative proposal for carrying out this research. (DHB)

64. IMPULSE LOADING TECHNIQUE TO DETECT CHANGES IN LOAD-CARRYING CAPACITY OF ASPHALT PAVEMENTS

Main Investigator: Not reported.

Status of Research and Publications: Completed. Published as NCHRP Report No. 21. Available from the Highway Research Board, Publications Department 805, 2101 Constitution Avenue, N. W., Washington, D. C. 20418. \$1.40 per copy.

Agency: Highway Research Board, through contract with Cornell Aeronautical Laboratory.

Previous Digest Report: None.

Research Problem. To find a rapid, simple, nondestructive, and accurate means of applying load-limiting restrictions to asphalt pavements. The flexibility that makes asphalt pavements versatile also makes some of them susceptible to seasonal variations in their load-carrying capacity. During spring thaws and other adverse weather conditions, it is periodically necessary to reduce the load limits on many thousands of miles of existing secondary asphalt highways. Methods used to set these restrictions have been empirical at best and, for the most part, have depended upon engineering judgement.

Method of Study. (1) Established that the impulse loading technique was applicable and developed a method to correlate the impulse loading technique with a static loading technique. (2) Designed and constructed a towable impulse generator, a portable dynamic displacement transducer, and instrumentation and recording equipment. (3) Conducted field tests on a "poor" and a "good" road.

Major Findings. An impulsive loading technique can be used to detect seasonal variations in the load-carrying capacity. It also appears to be a promising method of distinguishing a poor road from a good one. The tests showed a seasonal variation of about 70% in the dynamic displacement transducer

first peak deflection for the poor road and a slightly higher percentage for the corrected DDT deflection (absolute deflection). The tests also showed the poor road deflection to be about 2-1/2 times as large as that of the good road. The rebound time and impulse duration also showed results that reflected seasonal variations, but to a lesser degree. Data on wave propagation time proved inconclusive. (DHB)

65. IMPROVING METHODS OF COMMUNICATING INFORMATION TO MOTORISTS

Main Investigator: Not reported.

Status of Research and Publications: In process.

Agency: Highway Research Board, through contract with the Airborne Instruments Laboratory (Long Island, New York).

Previous Digest Report: None.

Research Problem. To determine (1) what information is needed by highway users for their safe, convenient, efficient, and comfortable performance of the "driving task"; (2) the principal factors and interactions underlying selection and communication of this information; (3) to what extent visual communications can be used successfully; (4) whether supplementary communications techniques are needed, and, if so, where and how they can be effectively applied.

Method of Study. Define and measure the pertinent factors and functions of the information system where possible; identify those variables under the control of the highway designer, the traffic engineer, the traffic control officer, and the driver education expert; learn what motivates drivers to respond naturally and safely to the range of messages he must receive during a trip; determine the driver's capacity to understand different amounts and types of highway information. (DHB)

66. STUDY OF STUDDED SNOW TIRES

Main Investigator: Not reported. Research conducted by a committee composed of individuals representing tire manufacturers, state highway departments, universities, federal agencies, and other interested groups.

Status of Research and Publications: Completed. Findings issued in seven reports published as Highway Research Record No. 136. 77 pages. Copies may be obtained from the Highway Research Board, Publications Department 805, 2101 Constitution Avenue, N. W., Washington, D. C. 20418. \$1.80 per copy.

Agency: Highway Research Board.

Previous Digest Report: None.

Research Problem. To ascertain the advantages and disadvantages of the studded snow tire. In addition to its standard snow tread design, the tire uses roughly 100 tungsten carbide cores, or studs, inserted in the tread pattern to give it improved traction in starting and stopping on snow and ice. The tire has become very popular. However, there has been much concern about the tire's effect on pavement wear and a number of safety considerations.

Major Findings. All reports concerned with traction performance generally agree that the tire does provide significantly greater stopping ability on ice and snow. However, one study showed that conventional tires gave more traction on dry pavement surfaces than did the studded tires. Most of the reports were concerned about the abrasive effect of the tire on pavement surfaces. Results differed as to the degree and conditions under which the tire had this effect. (DHB)

67. THE ECONOMICS OF ROADWAY LIGHTING

Main Investigator: Not reported.

Status of Research and Publications: Completed. Findings published in NCHRP Report No. 20. Available from the Highway Research Board, Publications Department 805, 2101 Constitution Avenue, N. W., Washington, D. C. 20418. \$3.20 per copy.

Agency: Highway Research Board, through contract with the Franklin Institute.

Previous Digest Report: None.

Research Problem. Develop an effective way to estimate the cost of highway lighting systems in terms of initial and annual expenses; find a meaningful method of comparing different kinds of lighting systems.

Method of Study. Cost data were gathered through comprehensive questionnaires to state highway departments, municipalities, public utility companies, and hardware manufacturers. Cost information was tabulated in an easy-to-use form. Information includes data concerning useful operating life and costs for hardware, installation, power, maintenance, and financing for various lighting systems.

Major Findings. The report gives three typical highway examples--two-lane, four-lane divided, and six-lane divided--to show how the data can be used effectively to determine the annual costs for alternate lighting systems. The examples include recommended design criteria to illustrate normal constraints found in roadway lighting design. Eight complete lighting systems are specified for the different types of highways. Among conclusions reached are these: (1) Use of 700-watt and 1,000-watt mercury lamps at mounting heights of 35 feet and higher greatly reduces costs because fewer poles are needed per mile. (2) Costs can be reduced by increasing the present

standard 3-to-1 uniformity ratio. Such a move would reduce the illumination requirements between lights. (3) The standard configurations of 400-watt lamps at 30-foot mounting heights used on four-and six-lane expressways can't economically meet illumination requirements. A cost data form is also provided in the report on which all relevant roadway lighting systems costs can be entered. Using this in conjunction with other information given in the report, the total annual light costs per mile for a given system can be estimated. Options are also provided for comparing user ownership costs with those of various forms of rental. (DHB)

68. STUDIES IN ENVIRONMENTAL GEOLOGY IN NORTHEASTERN ILLINOIS

Main Investigators: James E. Hackett, George M. Hughes, Ronald A. Landon, Jean I. Larsen, and Roy E. Williams.

Status of Research and Publications: A continuing project begun in 1962. Recent reports completed include Roy E. Williams, "Shallow Hydrogeology of Glacial Drifts in Northeastern Illinois," submitted as doctoral dissertation, University of Illinois, June, 1966. Parts of the manuscript are being prepared for publication. Ronald A. Landon, Materials Framework and Geologic Properties of DuPage County (manuscript in preparation). James E. Hackett, An Application of Geologic Information to Land Use in the Chicago Metropolitan Region, Environmental Geology Notes, No. 8, January, 1966. Copies of reports available from the Geological Survey without charge.

Agency: State of Illinois, Geological Survey.

Previous Digest Report: 12:2-39.

Research Problem. Application of geologic data to a diversity of areal planning and development problems created by growth of a metropolitan region.

Major Findings. Of special interest is the completed study on application of geologic information to land use in the Chicago metropolitan region. The study was conducted in connection with acquisition of land for the DuPage County Forest Preserve. The geology of the area was studied to determine the potential multiple use of the land, taking into consideration four factors: (1) the presence of mineral resources, (2) the occurrence of ground water, (3) potential for surface water reservoirs, and (4) suitability for disposal of wastes. The county was divided into several classes of geological environments, and the suitability of each for specific uses designated. This information contributed to a land acquisition plan that had several advantages, including prevention of urban encroachment on the river floodplain, preservation of mineral resources for future use, opportunity to institute water management programs, and provision for development of water-based recreational facilities. (JIL)

69. EFFECTS OF SOAP, DETERGENT, AND WATER SOFTENER ON THE PLASTICITY OF EARTH MATERIALS

Main Investigators: W. Arthur White and Shirley M. Bremser.

Status of Research and Publications: Completed. Findings reported under the above title in Environmental Geology Notes, No. 12, August, 1966 Available from the Illinois Geological Survey without charge.

Agency: State of Illinois, Geological Survey.

Previous Digest Report: None.

Research Problem. To test the effects of a soap, a detergent, and a water softener on the plasticity of earth materials.

Major Findings. Several clay minerals tested showed changes in plasticity after the addition of various amounts of soap, detergent, and water softener. Earth materials containing clay have sufficient stability in their natural, undisturbed state to provide satisfactory support for many man-made structures. However, the plasticity of such materials may be changed if they are permeated by solutions containing soaps, detergents, water softeners, and other substances that occur in the effluents from septic tanks, oxidation ponds, refuse dumps, and other waste-disposal facilities. Changes include education of the plasticity range and liquid limit, with resulting increase in the liquidity index and "sensitivity" of the earth material. After many years of saturation by waste-disposal effluents, the earth material may be so sensitive that man-made or tectonic disturbances can, under certain conditions, cause the settling of buildings or start disastrous landslides. When a subdivision with septic tanks or a factory with a pond for waste disposal is planned, the possible effects of wastes on the stability of the underlying earth should be considered. (JIL)

70 URBAN PLANNING IN SPAIN WITHIN THE CONTEXT OF THE SPANISH POLITICAL SYSTEM

Main Investigator: Joseph M. Heikoff.

Status of Research and Publications: Field work in Madrid, Spain completed. Documents on Spanish government, politics, and administration in process of analysis.

Agency: University of Illinois, Bureau of Community Planning, under sponsorship of Fulbright Program.

Previous Digest Report: None.

Research Problem. The study focuses on the relationship between the technical and professional bureaucracy and elected or appointed politicians in governmental decision making. This study is concerned with three variables: (1) the nature of urban development problems, (2) the nature of the political

system, (3) governmental approaches to urban planning. It is usually assumed that the third variable is dependent upon the first two, but empirical investigation may indicate that similar approaches must be used in guiding the growth of urban areas regardless of differences in the political system.

Method of Study. Information about the history of Spain, especially during the twentieth century, the events leading up to the establishment of the Franco regime, the formal structure of government, and the urban planning function was obtained from interviews with public officials, government documents, and recent political and historical literature about Spain.

On the basis of this information, papers will be prepared on the following subjects: (1) Comparison between the pre-Civil War and post-Civil War Spanish government and politics to consider three alternatives for Spain's political future: (a) return to violent religious, political party, and class conflict; (b) institutionalization of the present authoritarian regime, with its enforced national unity; (c) evolution toward a peaceful pluralistic society with popular participation in the choice of public officials and governmental policies. (2) An account of the Spanish governmental structure, with special emphasis on municipal government and its relation to provincial and central government. This will include an account of the method of selecting elected representatives, political appointees, and the civil service. (3) An account of urban planning responsibilities and functions of local, provincial, and state governments; trends in urban growth; and Spanish approaches to urban land-use planning and control. (JMH)

71. CONTEMPORARY PROBLEMS AND PRACTICES IN ZONING ADMINISTRATION

Main Investigator: Eric C. Freund.

Status of Research and Publications: In process.

Agency: University of Illinois, Bureau of Community Planning.

Previous Digest Report: None.

Research Problem. Determine the problems that concern the members of boards of zoning appeal in their day-to-day operations.

Method of Study. Over the past four years, the Bureau has sponsored a series of Zoning Administration Institutes, both on and off the campus. The proceedings have been recorded on tapes. The tapes will be transcribed and analyzed, with particular reference to question-and-answer and workshop sessions. It is hoped that the product will be an interrelated account of the comments made by the Institute speakers, together with their replies to questions. An analysis will be made of the questions and verbal interchanges about several recurrent items of concern. (ECF)

72. PASI, PRESENT AND EMERGENT PROBLEMS AND PRACTICES IN LAND-USE CONTROL

Main Investigator: Eric C. Freund.

Status of Research and Publications: Completed. Findings presented at a symposium entitled "Changing Concepts of Human Habitations" held by the Central Building Research Institute of Roorkee (U.P.), India, December, 1965. Published as part of the symposium proceedings by M/S Nem Chand and Bros. Civil Lines, Roorkee (U.P.), India. Also available in mimeographed form from the Bureau of Community Planning, University of Illinois, at no charge.

Agency: University of Illinois, Bureau of Community Planning.

Previous Digest Report: None.

Research Problem. The study examines land-use problems and the evolution of controls from ancient to contemporary times, and illustrates that these are a primitive, though hopefully, an increasingly successful attempt by man to initiate homeostasis in order to rebalance an ecosystem he has disturbed. The process of homeostasis is carried out automatically in the normal process of nature, but by virtue of his special powers to alter natural balance, man has a moral obligation and a physical need to institute such a process in order to survive the results of his irresponsible activities. (ECF)

73. TRAFFIC LINKAGE PATTERNS BETWEEN A METROPOLITAN AREA AND THE COMMUNITIES WITHIN ITS REGION OF INFLUENCE

Main Investigator: George W. Greenwood.

Status of Research and Publications: Completed. Published under above title as Engineering Experiment Station Bulletin 488. For copies, write to Engineering Publications Office, 112 Engineering Hall, University of Illinois, Urbana, Illinois 61801. \$4.00 per copy.

Agency: University of Illinois, Bureau of Community Planning, under sponsorship of State of Illinois, Division of Highways, and U. S. Department of Commerce, Bureau of Public Roads.

Previous Digest Reports: 8:2-20; 10:2-104.

Research Problem. Data from a 1958 Champaign-Urbana metropolitan area traffic study are used to portray patterns of intercommunity travel which can be used as the basis for development of intercommunity traffic models. Factors discussed include spatial distribution of regional travel, volume or traffic interaction, and degree of central city dominance as expressed by trip generation. These items are investigated by total as well as by individual trip purpose categories.

Major Findings. (1) The 14-county area surrounding Champaign-Urbana contains more than 90 per cent of the regional traffic movements and provides ample data for analysis in developing a traffic model. (2) Champaign-Urbana's area of influence for the generation of regional traffic is of constant size and its configuration is dependent upon the distance between Champaign-Urbana and other competing cities. (3) Trip purposes associated with the larger volumes of regional trips are different from those purposes for which Champaign-Urbana shows the greatest degree of dominance. (4) Champaign-Urbana's over-all pattern of trip generation is one of net attraction, but individual exceptions occur as a result of unique traffic generating community characteristics. (ECF)

74. IMPROVING BUS PATRONAGE IN MEDIUM-SIZE CITIES

Main Investigator: Michael A. S. Blurton.

Status of Research and Publications: Interim summary report, Premium Special Bus Service, issued September, 1966.

Agency: University of Illinois, Bureau of Economic and Business Research, under sponsorship of U. S. Department of Housing and Urban Development.

Previous Digest Reports: 12:1-59; 12:2-43.

Research Problem. Improving the future potential of bus transit in medium-sized cities. A major part of the project was to determine whether the Premium Special Service would increase the number of bus transit riders.

Method of Study. The program was conducted in Peoria and Decatur, Illinois. Premium Special Service is essentially a personalized, contractual, home-to-work express commuter service. The buses are routed to pick up a passenger not more than one-half block away from his home, and often in front of his home. The passenger rides on a monthly flash-pass, and the number of passes issued for each bus does not exceed the seating capacity of the bus used. Passengers are given personal attention, called by name, sometimes served coffee and doughnuts.

Major Findings. (1) Premium Special Service generated significant new traffic to industrial plants providing certain conditions of size were met. The level of new traffic was enough to have a major impact upon the earnings of the bus system and also in terms of cross-subsidizing other routes. (2) While Premium Special is also useful for the central business district, the potential immediate new traffic in cities of the sizes used in the project is significantly less for it than for industrial plants. All regular bus routes already gave direct service there, and the down-town ridership appears to have dropped proportionately less than for other generators.

(3) This type of personalized, home-to-work service is feasible to operate, provided it is competently staffed, continuously monitored, and continuous attention is given to detail. (4) The success of the service is inseparable from a heavy consumer orientation and marketing program. (5) The services can be coordinated between Premium runs at different hours, selected school operations, off-peak shopper routes, and even regular route augmentation in the late peaks.

The overall results for the Peoria system are summarized in these figures: As a result of Premium Special Service, bus mileage rose 5%, ridership 13%, gross revenue increased 12%, and net revenue increased 8%. (MASB)

75. THE DEVELOPMENT OF A TRANSPORTATION SYSTEM FOR THE OPTIMUM USE OF NATURAL RESOURCES

Main Investigator: Ronald W. Drucker.

Status of Research and Publications: Completed. Published as a doctoral dissertation, August, 1966.

Agency: University of Illinois, Department of Civil Engineering.

Previous Digest Report: None.

Research Problem. After determining the extent to which each transport mode consumes natural resources while producing transportation, develop a total transportation system that makes the optimum use of the natural resources.

Method of Study. Highway, railway, waterway, and airway transportation were studied. For each mode, resource consumption falls into two categories: fixed and variable. Fixed consumption is a function of the physical transport facility, such as the highway or the railroad, itself. It represents land usage and building materials necessary to establish the physical plant at a specific capacity level. Variable consumption is a function of the number of vehicles operated over the facility, such as the number of trucks or trains. Associated with each vehicle is its consumption of man hours and fuel, and its contribution to air and/or water pollution. Because the resource consumption pattern for any mode is the sum of the fixed and variable characteristics, it is necessary to study several types of physical plants for each mode as well as vary the amount and composition of traffic moving over the mode.

For each transport facility, a set of resource requirement coefficients, reflecting resource consumption as a function of traffic, can be developed. Through the use of these coefficients, it is possible to distribute any level of traffic, subject to a set of restrictions based upon the transport characteristics of commodities, through the combined transportation system to gain the optimum use of natural resources. (RWD)

76. PUBLIC HEALTH ISSUES AS URBAN POLITICAL DECISIONS

Main Investigator: Morris Davis.

Status of Research and Publications: In process.

Agency: University of Illinois, Department of Political Science,
under sponsorship of U. S. Department of Health, Education,
and Welfare.

Previous Digest Report: None.

Research Problem. To gather, compare, and analyze information
about the decisional process in very large urban units.

Method of Study. Decision-making analysis is employed in exam-
ining the issue process in seven or eight metropolises in the United
States. For each, issue contents investigated include fluoridation of
public water supplies, other public health problems, and questions apart
from public health. Most data utilized are drawn from case books in public
administration, state and local government, and party politics; from
serial publications on urban political behavior, from monographs on
particular cities; and from journal articles. Secondary analysis using
an explicit and systematic decision-making schema will be applied to
these data. A few case studies will be especially conducted for this
project. Decisional profiles on a variety of issues will be constructed
for each city, making it possible to ascertain intra-community stability
or instability of decision-making style, and to compose typologies of
style-content correlations for issues across communities. (MD)

77. DESIGN OF SOCIAL ACCOUNTING SYSTEM FOR STATE DEVELOPMENT PLANNING

Main Investigator: Jerald R. Barnard.

Status of Research and Publications: Research completed. Results to be
published December of 1966 as a Research Monograph, Bureau of
Business and Economic Research, University of Iowa.

Agency: University of Iowa, Bureau of Business and Economic Research.

Previous Digest Report: None.

Research Problem. To develop a comprehensive set of social economic
accounts for state and regional planning. The social accounting system
is intended (1) to generate economic information on the impact of spec-
ified economic change; (2) serve as a basis for projections of major
economic and demographic variables; and (3) provide an analysis of alter-
native programs to achieve specified goals.

Hypothesis. Information concerning the structure and interrelation-
ships of an economy is necessary for state and regional planning.

Method of Study and Major Findings. A social accounting system was developed for the state of Iowa in the form of a 70-sector matrix to measure the real and financial transactions in connection with production, consumption, accumulation, and regional trading processes. The model includes detailed current and capital account transactions for industry, households, and government, and a system of classification converters that depict the functional relationships among the data to provide an integrated and comprehensive system of real and monetary flows for evaluation, analysis, and information production for planning purposes. (JRB)

78. DOMESTIC WATER DEMANDS

Main Investigator: Not reported.

Status of Research and Publications: In process.

Agency: Johns Hopkins University, under sponsorship of U. S. Department of Housing and Urban Development.

Previous Digest Report: None.

Research Problem. Determine the variation and magnitude of residential water demands and correlate these demands with sewage flow. Also, determine the effect of light commercial establishments (shopping centers) on residential water demands.

Method of Study. Data will relate to houses having both public water supply and sewage disposal, public water supply and individual sewage disposal systems, and individual water supply and sewage disposal systems. (JS)

79. INDUSTRIAL REUSE OF PROCESS WATER

Main Investigator: Charles E. Renn.

Status of Research and Publications: In process.

Agency: Johns Hopkins University, in cooperation with the Federal Water Pollution Control Administration, Black and Decker Manufacturing Company, and the Maryland State Health Department.

Previous Digest Report: None.

Research Problem. Apply engineering to help solve the biological problems--slums, fouling, insect and snail nuisances, etc.--that occur when highly treated sewage is stored in exposed ponds for prolonged periods and reused in industrial processes. (CER)

80. WATER USE IN RESIDENTIAL AREAS

Main Investigators: John C. Geyer and F. Pierce Linaweaver, Jr.

Status of Research and Publications: Completed.

Agency: Johns Hopkins University, Department of Environmental Engineering Science, under sponsorship of U. S. Department of Housing and Urban Development.

Previous Digest Report: 12:2-50.

Research Problem. To investigate the rates of use of municipal water in housing areas of all types and income levels for the purpose of developing and recommending rational design criteria for urban water distribution systems.

Method of Study. Sixteen water utilities throughout the United States cooperated by installing and operating meter and punch tape recorders in some 41 homogeneous residential study areas. The data were analyzed to determine the interrelationships of water use rates and such variables as climate, income, charges for water, and lot size.

Major Findings. Residential water demands depend upon the total number of consumers, their economic levels as reflected by the market values of their homes, the average irrigable area of their lawns, the rate of evapotranspiration, and the quantity of precipitation effective in reducing lawn sprinkling. During dry periods, the daily sprinkling demand in a metered area approximately equals the evapotranspiration rate from the irrigable area. That is, with a large number of individual lawn-irrigators, the sum total of their decisions is as rational as if they were managing a large irrigation system and attempting to keep their crops (in this case, grass) well irrigated.

Peak demands in flat-rate residential areas are more than double those in metered areas, apparently because there is no economic restraint on rate and volume of water used for sprinkling. However, uses within the house (domestic use) in metered and in flat-rate areas do not differ significantly. Domestic use is lower in metered areas which utilize individual septic tanks for sewage disposal. Water distribution systems serving residential areas with gross densities of about seven homes per acre or less should be capable of supplying irrigation water in an amount equivalent to evapotranspiration from a crop of grass covering the entire area served. In order to do that satisfactorily the system should have capacity to meet: (1) a maximum daily demand of about three million gallons per square mile of area served and (2) a peak hourly demand rate of about seven million gallons per day per square mile. (JCG)

81. HEATED WATER RESEARCH PROJECT - PHASE II

Main Investigators: John C. Geyer, John E. Edinger, and Loren D. Jensen.

Status of Research and Publications: In process. Previous findings reported in J. E. Edinger and J. C. Geyer, Heat Exchange in the Environment, Edison Electric Institute Publication No. 65-902,

New York 17, New York, 1965; and C. Wurtz and C. E. Renn, Water Temperatures and Aquatic Life, Edison Electric Institute Publication No. 65-901, New York 17, New York, 1965.

Agency: Johns Hopkins University, Department of Environmental Engineering Science, under sponsorship of Edison Electric Institute.

Previous Digest Report: None.

Research Problem. To investigate the physical and biological effects of heated water discharged from the condensers of central steam electric power operating stations.

Method of Study. Establishment of field study sites for data collection under actual condenser discharge conditions. (JEE)

82. OPTIMUM USE OF REGIONAL WASTE TREATMENT FACILITIES

Main Investigator: Jon C. Liebman.

Status of Research and Publications: In process.

Agency: Johns Hopkins University, Department of Environmental Engineering Science, under sponsorship of Federal Water Pollution Control Administration.

Previous Digest Report: None.

Research Problem. To demonstrate the practical use of a dynamic programming model for planning and policy-setting in a river basin.

Method of Study. The model to be used provides information relating to the degree of BOD (Biochemical Oxygen Demand) removal which should be provided by each waste treatment plant on a stream in order to meet quality standards, and at the same time, minimize the total cost of treatment. Working in close collaboration with the Bureau of Water Resource Services of the New York State Department of Health, a stream in New York state will be studied. (JCL)

83. WATER USE IN COMMERCIAL AREAS

Main Investigators: J. B. Wolff, F. P. Linaweaver, Jr., and J. C. Geyer.

Status of Research and Publications: Completed.

Agency: Johns Hopkins University, Department of Environmental Engineering Science, under sponsorship of Department of Public Works, Baltimore County, Maryland.

Previous Digest Report: None.

Research Problem. Determine the daily water use patterns and the magnitude and variation of maximum hourly demands of commercial and institutional establishments, in order to establish rational standards for the design of water distribution systems in areas having combined residential and commercial demands.

Method of Study. Recording devices were installed on water meters of a variety of commercial and institutional consumers to obtain patterns of water demands. These and other data were analyzed and evaluated to ascertain the impact of these demands on the overall daily water demand. Rational design criteria for such water distribution systems were recommended.

Major Findings. The parameters selected to best describe water use characteristics for each type of commercial establishment or institution studied, as well as the "expected" mean annual water use, maximum daily water use, and peak hourly water use for each type of user were listed. The study concluded that commercial and institutional demands do not materially increase the peak of the water use hydrograph during periods of maximum water demand. (JCG)

84. URBAN STORM RUNOFF

Main Investigator: John C. Geyer.

Status of Research and Publications: In process. A computer program has been developed to simulate the runoff hydrograph from impervious areas by applying the equation of gradually varied unsteady flow in open channels. Previous areas will be studied next, and analytical infiltration solutions be applied to the treatment of combined pervious and impervious areas.

Agency: Johns Hopkins University, Department of Environmental Engineering Science, under sponsorship of U. S. Bureau of Public Roads.

Previous Digest Report: 12:2-49.

Research Problem. To develop improved methods of estimating runoff for use in designing storm drain systems for urban areas.

Method of Study. Some 17 recording rain gages and 20 runoff measuring stations are in operation. The investigations of the economic aspects of providing storm drainage facilities is continuing. (JCG)

85. THE SOCIAL CONTEXT OF INDUSTRY

Main Investigators: A. L. Stinchcombe and Clinton Herrick.

Status of Research and Publications: In process.

Agency: Johns Hopkins University, Department of Social Relations, under sponsorship of National Science Foundation, Division of Social Sciences.

Previous Digest Report: None.

Research Problem. Locate social variables related to the predominance of one or another industry in communities, and to trace the causal links between such variables.

Method of Study. Using a sample of counties, the industrial composition of the labor force is related to social characteristics. (ALS)

86. THE CONSEQUENCES OF JUDICIAL REFORM: THE CRIMINAL COURTS IN TWO CITIES

Main Investigator: Martin Levin.

Status of Research and Publications: In process.

Agency: Joint Center for Urban Studies of Massachusetts Institute of Technology and Harvard University, under sponsorship of Social Science Research Council.

Previous Digest Report: None.

Research Problem. A study of criminal court judges in two cities in which the processes of selection represent polar extremes. In one city, the judiciary is chosen by means of nonpartisan election. In the other city, selection is dependent upon political considerations.

Method of Study. In each city, research will focus on the process of recruiting a criminal court judge, the standards underlying a judge's decision, the general record of criminal dispositions, and the political role of judges. (CRL)

87. PROBLEMS OF RURAL-URBAN TRANSITION

Main Investigator: Not reported.

Status of Research and Publications: In process.

Agency: Kansas State University of Agriculture and Applied Science, Agricultural Experiment Station.

Previous Digest Report: None.

Research Problem. (1) Determine the limits, kinds, and levels of governmental activity related to economic development approved by local public opinion. (2) Determine the nature of adaptation and response to

declines in levels of community facilities and services. (3) Discover how competition for public offices is affected by changes in amount of governmental activity and investment in public services. (4) Relate the actual and potential functions of local units of government to an expanded role in economic development. (5) Probe the potential and viability of "intermediate" institutions (neither private enterprise nor governmental), such as cooperatives, Chambers of Commerce, mental health associations, organized interest groups, and service clubs.

Method of Study. Analyze counties having a continuing tendency toward greater urbanization and at the same time containing extensive rural areas. Utilize extensive survey data already collected, especially in Reno County, a partially urbanized county. Examine public records, such as official election reports, to compare competition for and participation in elections, determine continuity and turnover in positions of leadership, and resolution of important issues in rural, transitional, and urban settings. Examine other available and pertinent sources, such as newspaper files, reports of state and local offices, and publications of major interest groups. (JS)

88. A STORAGE AND RETRIEVAL SYSTEM FOR URBAN SOURCE MATERIALS

Main Investigator: John E. Rickert.

Status of Research and Publications: In process.

Agency: Kent State University, Center for Urban Regionalism, under sponsorship of U. S. Department of Housing and Urban Development.

Previous Digest Report: None.

Research Problem. To establish a semi-automatic system for storage and retrieval of urban bibliographic references to published materials that are used by urban researchers. "Urban" is not a major classification in the Dewey Decimal Library System. Therefore, topics highly related to urban studies and research are often separated physically as well as topically in the library. A working urban collection is needed. Because the users of urban information vary widely in disciplinary background and levels of sophistication, it should be interdisciplinary, interprofessional, and should retrieve information rapidly. (JER)

89. METROPOLITAN GOVERNMENT FOR THE CHICAGO AREA

Main Investigator: Gilbert Y. Steiner

Status of Research and Publications: Completed. Published under the title Metropolitan Government and the Real World: The Case of Chicago as Monograph #3, January, 1966, by the Center for Research in Urban Government, Loyola University. \$1.00 per copy.

Agency: Loyola University, Center for Research in Urban Government.

Previous Digest Report: None.

Research Problem. To examine the suitability and the feasibility of metropolitan government for the Chicago area.

Major Findings. The major impediments to metropolitan government in the Chicago area are race, money, and politics. The large Negro population would hardly cooperate with a metropolitan government that tended to disregard the questions of segregation and integration in favor of the distinct and special concerns of white suburbanians. The question of who would pay for the metropolitan government's programs, complicated judgements involving cost-benefit ratios and delineation of metropolitan services might well stymie the provision of such services. Politically, the creation of an electoral area to cover the six-county metropolitan complex would simultaneously jeopardize existing bases of both Republican and Democratic strength, and thus be undesirable to both parties. Because of simplification of structure and the broader span of control, metropolitan government is assumed to be an effective technique for providing municipal services in the most efficient way possible. However, local government's main functions, protesting the disadvantaged and maximizing democratic participation, could not be effectively exercised in metropolitan government. Metropolitan government is an impractical plan for securing adjustment of interests. The normal processes of politics are well-suited to implementing whatever measure of agreement can be established between city and suburban spokesman. (JC)

90. THE DEFEAT OF AN URBAN RENEWAL BOND ISSUE IN CHICAGO

Main Investigator: John McMullen Ducey.

Status of Research and Publications: Completed. Published under the title Who Killed the Urban Renewal Bond Issue? as Monograph #4, March, 1966, by the Center for Research in Urban Government, Loyola University. \$1.00 per copy.

Agency: Loyola University, Center for Research in Urban Government.

Previous Digest Report: None.

Research Problem. To analyze the primary election of April, 1962, in Chicago, in an attempt to explain the unexpected failure of the urban renewal and five other municipal bond issues.

Method of Study. Three possible theories explaining the election results were advanced and tested: (1) the vote reflected a break up in the Democratic organization; (2) urban renewal was unpopular and its presence on the ballot attracted many voters who voted "no" on the other issues as well; (3) the vote represented a protest by owners of real estate against continual increases of property taxes and against governmental spending in general.

Major Findings. The failure of the bond issue was largely a protest against governmental spending. Had tax bills been mailed after, rather than shortly before the referendum, different election returns might have resulted. (JC)

91. SOCIAL AND ECONOMIC CONSEQUENCES OF CHANGES IN EMPLOYMENT UPON SELECTED NORTHEASTERN COMMUNITIES

Main Investigator: Louis A. Ploch.

Status of Research and Publications: In process.

Agency: University of Maine, Agricultural Experiment Station, under sponsorship of U. S. Department of Agriculture. This study is parallel to one being conducted at the University of Delaware, Item 46, page 26.

Previous Digest Report: None.

Research Problem. Determine the consequences of changes in employment upon social and economic organization of selected communities in the Northeast region.

Method of Study. Data pertaining to consequences associated with changes in employment opportunities and sources will be obtained in the following areas: population composition; the educational system; labor force composition and the provision of retail and wholesale services; land use and the related phenomena of occupancy, land values, zoning, and planning. The following sites will be studied: a small, isolated, rural community affected by a scientific establishment; an agriculturally rural area affected by the erection of a food processing plant; a two-community area undergoing depopulation and loss of industry but which is the potential site of a large, industrial complex; a community in an agriculturally rural area gaining an industry primarily employing women. (JS)

92. URBAN HYDROLOGIC RELATIONSHIPS

Main Investigator: Warren Viessman, Jr.

Status of Research and Publications: In process.

Agency: University of Maine, Water Resources Center, under sponsorship of U. S. Department of the Interior.

Previous Digest Report: None.

Research Problem. Develop and provide more adequate procedures for predicting, in a reliable manner, the complete runoff hydrograph for urban drainage areas of varying physical characteristics. Research on timing of urban hydrologic events is also included.

Method of Study. Effective rainfall inputs specified as a sequence of average one-minute intensities will be used to generate the output hydrograph. (WV)

93. POLITICAL AND ADMINISTRATIVE FACTORS AFFECTING AGRICULTURAL PRODUCTION IN TWO TAMIL (INDIA) VILLAGES

Main Investigator: Stanley J. Heginbotham.

Status of Research and Publications: Field research in India to begin January, 1967. To be submitted as a doctoral dissertation.

Agency: Massachusetts Institute of Technology, Department of Political Science, under sponsorship of Foreign Area Fellowship Program.

Previous Digest Report: None.

Research Problem. Study a specific problem in a specific region of India to show how the various political and administrative institutions of India interact to form the nation's political process in microcosm. The problem of agricultural development is of concern to a wide range of local, state, and central government agencies, political party units, and legislative institutions. An effort will be made to trace the direct and indirect effects of these groups on the attitudes and decisions of individual farmers with respect to the use of productive agricultural inputs.

Method of Study. Examine food production conditions in two Tamil villages; interview farmers, village bureaucrats, and local politicians to clarify views of each group toward the other two and toward agricultural activities. Study the political and administrative system in order to locate the sources of governmental successes and failures to induce innovations in the use of agricultural inputs. (SJH)

94. MAJOR PROGRAM CHANGE IN THREE URBAN SERVICES

Main Investigators: Robert S. Friedman and Robert H. Pealy.

Status of Research and Publications: In process.

Agency: University of Michigan, Institute of Public Administration.

Previous Digest Report: None.

Research Problem. To investigate the process by which major change occurs in governmental programs.

Method of Study. The research sites are four large Michigan cities, and the functional (program) areas to be analyzed are streets, parks, and primary and secondary education. For purposes of description and analysis,

a systems approach will be used. Systems, as defined here, are primarily associated with functions (in this case, streets, parks, and primary and secondary education). The major research tool will be an interview schedule to be administered to each of the actors in each of the systems.

It seems likely that change activity occurs largely within the confines of the system, that the norms and ideologies associated with the functional areas are related to distribution and patterns of influence within the systems. Thus functional differences would explain more of the variation in distribution and patterns of influence than, for example, the personal characteristics of the actors in the systems or the structural differences in the systems. (RHP)

95. EVALUATION OF PUBLIC HEALTH PRACTICES

Main Investigator: Vlado A. Getting.

Status of Research and Publications: In process.

Agency: University of Michigan, School of Public Health, Department of Community Health Services, under sponsorship of U. S. Department of Health, Education, and Welfare.

Previous Digest Report: None.

Research Problem. Conduct research on the evaluation of public health practices and behavioral factors in public health programs, aimed at developing methods to enable health agencies (1) to prepare explicit statements of objectives for programs or services at each level of organization; (2) to identify barriers to program effectiveness; and (3) to strengthen programs in accordance with evaluation results.

Method of Study. The research is being conducted by teams representing the fields of political science, medicine, nursing, sanitation, social psychology, and sociology. To achieve the first objective, revisions based on eleven field tests have been made of a guide for evaluation. With respect to the second objective, a series of studies has been initiated on (a) factors influencing the decisions of city councils on health issues; (b) the influence of health officer attitudes, community factors, and characteristics of health department staff upon the extent to which health departments have increased their activities in the newer, non-traditional health programs; (c) the effects of the health officer's orientation (i.e., the extent to which he adopts a community orientation vs. a clinical orientation) upon successful functioning of health departments; and (d) the influence of intra-organizational factors upon the ability of organizations to be adaptive or innovative. (VAG)

96. FLOURIDATION AND COMMUNITY POLITICS

Main Investigator: Harlan Hahn.

Status of Research and Publications: In process.

Agency: University of Michigan, School of Public Health, under sponsorship of U. S. Department of Health, Education, and Welfare.

Previous Digest Report: None.

Research Problem. To determine the political characteristics of fluoridation as a community issue and to provide a theoretical understanding of fluoridation controversies.

Method of Study. Since decisions concerning fluoridation frequently are made by the voters, the research will approach the study of community decision making primarily through the analysis of voting statistics. Election returns and socio-economic characteristics will be compared by precinct for fluoridation referenda and other elections. Clarification of the findings of previous research will be sought by analyzing socio-economic attributes associated with fluoridation support or opposition. Similarly, an effort will be made to merge the results of prior studies of alienation and community leadership by testing the hypothesis that segments of the community which normally oppose incumbent city officials also will oppose fluoridation if the leaders of the community appear vulnerable to such opposition. (JS)

97. URBAN TIME-USE SURVEY

Main Investigators: Philip E. Converse and John Robinson.

Status of Research and Publications: In process.

Agency: University of Michigan, Survey Research Center, under sponsorship of National Science Foundation.

Previous Digest Report: None.

Research Problem. Collection and analysis of data concerning allocation of time by urban residents.

Method of Study. Data collected concerns allocation of time across nearly 100 different types of activities for a 24-hour period in the lives of 1,244 respondents between the ages of 19 and 65, constituting a probability sample of individuals residing in or near cities of 50,000 population and over. A supplementary sample of 780 respondents in Jackson, Michigan, were also interviewed to match data from comparable urban sites in over a dozen Eastern and Western European countries. Respondents kept a time diary for a 24-hour period. This material became the basis for a more intensive personal interview on the subsequent day. Additional information included: secondary activities going on concurrently with primary ones; the physical locus of each activity; persons present. Information on satisfaction from various types of time use, feelings of time pressure, and the substitutability of different kinds of activities was collected, as well as standard sociological data on each respondent. (PEC)

98. HEALTH AND ADJUSTMENT OF OLDER PEOPLE IN SMALL TOWNS

Main Investigators: C. Terence Pihlblad and Robert L. McNamara.

Status of Research and Publications: A three-year study in process.
Completion expected in 1968.

Agency: University of Missouri, Department of Sociology and Anthropology,
under sponsorship of U. S. Department of Health, Education, and
Welfare.

Previous Digest Report: None.

Research Problem. Survey and analyze the health conditions and
needs of older persons residing in small towns of Missouri, and the
relationship of health to social participation and personal and social
adjustment of these older persons.

Method of Study. Some 2,000 interviews of older persons in their
homes are being conducted. The study sites are 12 towns representing
different population categories and contrasting social areas of the state. (CTP)

99. COMMUNITY STRUCTURE AND INVOLVEMENT

Main Investigators: Harold F. Kaufman, Kenneth P. Wilkinson, and Peggy
J. Ross.

Status of Research and Publications: In process.

Agency: Mississippi State University, Department of Sociology, under
sponsorship of U. S. Department of Health, Education, and
Welfare.

Previous Digest Report: None.

Research Problem. To collect additional field data for a larger
study of community structure. Field work in two communities has already
provided information on leadership, organizations, and activities in com-
munity action programs, and the involvement of individuals in community
action as related to locality stratification. Additional field work will
be concerned with (1) leadership, organizations, and activities within
the Negro community, and relations between the Negro community and the larger
community; (2) organization of rural neighborhoods surrounding the two
communities and their involvement in local development programs.

Method of Study. The field procedure in each phase will consist
of participant observation, analysis of newspapers and public records, and
interviews with participants in selected programs of action. These data
will be used along with data already collected to describe and contrast

types of community structure within which mental health and other action programs are carried out and to provide the context for understanding the involvement of the individual in community affairs. The latter is seen as a step toward a later study of the relation between community involvement and mental health and illness. (HFK)

100. TRAINING NEEDS IN MANAGING HOUSING FOR THE ELDERLY

Main Investigator: John D. Lange.

Status of Research and Publications: A two-year project in process. Completion expected in 1968.

Agency: National Association of Housing and Redevelopment Officials, under sponsorship of U. S. Department of Health, Education, and Welfare.

Previous Digest Report: None.

Research Problem. Survey and analyze training capability and needs in the field of management of housing for the elderly.

Method of Study. (1) Inventory the resources available for such training, including: universities with either a proven capability or an interest in developing a capability for conducting "academic" training courses; non-university resources capable of and interested in sponsoring in-service training programs; and training materials available in the field of elderly housing management. (2) Ascertain the dimensions of the market for such training among persons already in the field of elderly housing management, and for those who will enter this field over the next five years. (3) Provide information and consultative services for management training in housing for the elderly for the duration of the project. Following the assembly of these data and materials, NAHRO will make recommendations concerning the training needs in management of housing for the elderly, and how best these needs can be filled by available resources. (JDL)

101. RAIL RAPID TRANSIT PATRONAGE IN THE WASHINGTON METROPOLITAN STATISTICAL AREA IN 1980

Main Investigators: William I. Herman and Curtis O. Siegel.

Status of Research and Publications: In process.

Agency: National Capital Transportation Agency (Washington, D. C.).

Previous Digest Report: None.

Research Problem. To project the patronage of the Congressionally approved 25-mile rail rapid transit system in the Washington Metropolitan Statistical area, for 1980.

Method of Study. Estimates of peak-hour, daily, and annual passengers will be developed. Peak-hour data will also show mode of arrival (e.g., walk, auto-driver or passenger, or bus transfer) at each station, and station-to-station passenger volumes (this latter also estimated for a 24-hour period). Estimates of annual passenger usage will also be made for 1971 (the first year of operation) through 2020. A recent post card origin-destination survey of bus passenger movements over a 20-hour period (6:00 a.m. - 1:00 a.m.) covering the four local bus companies serving the Washington area has been coded for traffic zones, mode of arriving and departing from the bus, and number of cars in the household. (COS)

102. THE RETAIL TRADE ECONOMY OF DAVID CITY, NEBRASKA

Main Investigators: Edward L. Hauswald and J. Timothy Wilson.

Status of Research and Publications: Completed and issued October, 1966. Paperback edition available on loan from the Bureau of Business Research, University of Nebraska.

Agency: University of Nebraska, Bureau of Business Research, under sponsorship of Northern Natural Gas Company of Omaha, and Western Power and Gas Company of David City, Nebraska, for use by the David City Development Corporation.

Previous Digest Report: None.

Research Problem. (1) To provide the David City, Nebraska, business community with a description and analysis of its retail trade area considering (a) the spatial extent of the retail trade area, (b) the shopping habits and attitudes of customers, both actual and potential, and (c) description and analysis of the existent retail trade economy. (2) To provide a historical benchmark of the spatial extent of David City's retail trade area, for measuring modifications that result from a business district improvement program conducted from the spring of 1965 to the fall of 1966.

Method of Study. A 30% sample of households in the region deemed to be most nearly equivalent to that over which David City retail merchants either have or might be expected to achieve dominance were surveyed by a mailed questionnaire. Households were queried as to when they shopped, what improvements in shopping conditions they had noted and what improvements were needed, and where and why certain items (27 goods and services) were bought. Trading area delimitations were made for both individual and groups of items. Using additional materials, including U. S. Department of Commerce censuses, the population, employment, income, and retail activity were documented and analyzed.

Major Findings. (1) Trading area delimitations were determinable for 22 of 27 individual items, four item groups, and a composite group. Differences between item areas and the composite area were determined.

(2) Among shopping habits and attitudes quantified and analyzed, it was noted that Thursday night was unexpectedly a preferred time to shop by a sizable number of respondent households. (3) In the David City retail trade economy, increases in money and/or real incomes have been accompanied by increases in spending in retail goods and services that were insufficient to induce expansion of establishments and/or employment in retail activities. Retail activity did not, therefore, absorb the labor force emigrating from agricultural and other non-trade, non-service employment. Especially important was the lack of increased employment in recent years in the services component of retail activity. (ELH)

103. AN ENGINEERING-ECONOMIC MODEL FOR WASTE-WATER RECLAMATION AND REUSE

Main Investigator: Richard G. Orcutt.

Status of Research and Publications: In process.

Agency: University of Nevada, under sponsorship of U. S. Department of Interior.

Previous Digest Report: None.

Research Problem. To establish a method for developing an optimum waste-water reclamation-reuse system.

Method of Study. Data for the model system will be developed and, based upon a selected operating procedure, the sensitivity of the annual cost of the system to the principal variables will be evaluated. (RGO)

104. METROPOLITAN AND REGIONAL AREAS GOVERNMENTAL STUDY

Main Investigator: Troy R. Westmeyer.

Status of Research and Publications: Completed. Report available without charge from the Publications Office, New York State Senate, Albany, New York.

Agency: State of New York, New York State Joint Legislative Committee on Metropolitan and Regional Areas Studies.

Previous Digest Report: None.

Research Problem. Determine the governmental needs of metropolitan regions in New York.

Previous Relevant Research. Annual reports have been issued by predecessor committees since 1957.

Method of Study. Analysis of related developments in other states; legislative hearings in each of the New York State metropolitan areas.

Major Findings. Ten major recommendations were advanced for state legislation and for consideration by the New York State Constitutional Convention. (TRW)

105. ORGANIZING HEALTH SERVICES FOR INDIGENT HOMELESS PEOPLE IN NEW YORK CITY

Main Investigators: Helen C. Hilling and Lorraine Mustoe.

Status of Research and Publications: In process.

Agency: New York University, Graduate School of Public Administration, under sponsorship of U. S. Department of Health, Education, and Welfare.

Previous Digest Report: None.

Research Problem. Identify patterns of living to serve as a basis for administrative planning for the specific needs of indigent homeless people and practical ways of involving them in medical care. Although there have been a number of efforts to rehabilitate skid row residents in our major cities, few have centered on medical care as an organizing concept, and none can report sustained health improvements for a significant number of persons. (HH)

106. IMPACT OF SPACE FACILITIES ON THE COMMUNITY

Main Investigator: Herman G. Berkman.

Status of Research and Publications: In process.

Agency: New York University, Graduate School of Public Administration.

Previous Digest Report: None.

Research Problem. Space facilities constitute the major economic activity of several cities. The purpose of this research is to gauge the impact on a community of uncertainty and other attendant characteristics of such situations. Spin-off possibilities are also to be examined. The case of Huntsville, Alabama, will be studied in depth. (HGB)

107. THE DYNAMICS OF ADMINISTRATIVE PRACTICE

Main Investigators: Helen C. Hilling and Daniel C. Walden.

Status of Research and Publications: Publication, pending authorization by the Public Health Service, expected summer of 1967

Agency: New York University, Graduate School of Public Administration, under sponsorship of U. S. Department of Health, Education, and Welfare.

Previous Digest Report: None.

Research Problem. Study the administrative dynamics and practice growing from a new type of contract between the New York City Department of Health and a voluntary hospital. The contract's purpose is to provide ambulatory care.

Method of Study. Data collected mainly by observation, study of documents, and interviews. The material gives promise of being useful in a comparative study documenting, in part, the evaluation of theory in administration. (HCH)

108. THE OLD CITIES PROJECT

Main Investigators: Dick Netzer and Ralph Kaminsky.

Status of Research and Publications: In process. Completion scheduled for late spring of 1967. Findings to be published by the New York Regional Plan Association, Inc., shortly after completion.

Agency: New York University, Graduate School of Public Administration, under contract with the New York Regional Plan Association, Inc.

Previous Digest Report: None.

Research Problem. Examine the factors which determine residence choice, such as quality of housing stock, local public services (mainly education, but including recreation and cultural facilities and other amenities), to determine how the old cities in the New York region (22 counties) can be made more livable. The population and economic growth inevitable in the New York region should be channeled into urban concentrations and not allowed to produce uninhibited urban sprawl. Because new centers alone cannot accommodate the growth, it is imperative to revitalize and/or ensure the continuing growth of old cities.

Method of Study. Review housing policy aimed at upgrading and increasing the supply of good housing for middle- and low-income families; estimate future requirements for public schools; estimate the future costs of urban amenities; consider means of overcoming the social and economic drag of poverty; examine the question of how fiscal responsibility should be shared among the federal, state, and local levels of government. (SJL)

109. A PROSPECTUS FOR A COMPREHENSIVE STATE PLANNING PROGRAM ON LONG ISLAND

Main Investigators: Herman G. Berkman, T. Ledyard Blakeman, Milton A. Gabrielson, Ray F. Harvey, William N. Leonard, James J. Manusoff, Dick Netzer, Perry L. Norton, Bertram A. Weinert, Troy R. Westmeyer, and Charlton F. Chute.

Status of Research and Publications: Completed. Findings submitted in a 230 page confidential report to the New York State Office of Planning Coordination.

Agency: New York University, Graduate School of Public Administration, and State of New York, Office of Planning Coordination (formerly the Office for Regional Development).

Previous Digest Report: 12:1-82.

Research Problem. To prepare a prospectus for a Comprehensive State Planning Program on Long Island, involving mainly Nassau and Suffolk Counties, to aid the Office of Planning Coordination in the preparation of a state-wide development plan on a region-by-region basis. The project defined, analyzed, and described in specific detail the various kinds of state planning concern, as distinguished from matters of county, town, city, and village planning on one hand, and matters of national planning concern on the other. Recognition was also given to matters of joint state and local planning interest and of joint state and federal significance.

Hypothesis. There is a level of state planning responsibility on a regional basis that can be defined and described in detail, and which differs, at least in content, from local and regional planning on one hand, and from state-wide and national planning on the other

Method of Study. Interviews were held with leading representatives of state administrative agencies related to their planning concerns--past, present, and prospective--in and with the rapidly urbanizing counties of Nassau and Suffolk. Interviews were also held with the leading local and regional personnel, both official and unofficial, concerned with planning on Long Island. Laws, administrative reports, and special studies were analyzed for material relevant to the subject.

Major Findings. The findings cannot be released to the public at this time. (CFC)

110. PROJECT ON SOCIAL WELFARE LAW

Main Investigators: Norman Dorsen, Stanley Zimmerman, Barbara Flicker, Harold Rothwax, and Elizabeth Wickenden

Status of Research and Publications: A continuing project. The Project publishes a bi-monthly bulletin, the Welfare Law Bulletin, which is free to individual subscribers and available in bulk subscriptions at \$4.00 a year per subscription. For information, contact Welfare Law Bulletin, 46 Washington Mews, New York, N. Y. 10003. Future plans include publication of supplements containing articles on specific problems in welfare law

Agency: New York University, School of Law, Arthur Garfield Hays Civil Liberties Program.

Previous Digest Report: None.

Research Problem. The function of the Project is to conduct and stimulate research on the many facets of social welfare law, and serve as a national clearing house for information and materials in this research area. The Project will focus on the substantive and procedural rights of persons entitled to public benefits, such as rights to unemployment insurance, workmen's compensation, social security insurance, public assistance, public housing, child welfare services, and education or training programs. The Project will seek ways to clarify the legal rights and protections connected with these benefits, all of which are based on varying factors of entitlement. It will consider possible infringement of constitutional, statutory, and other rights in the administration of social welfare programs, such as arbitrary or unreasonable eligibility requirements, inequitable distribution of benefits, use of "midnight" and other unreasonable searches, release of privileged information, and restrictions on freedom of movement. The Project will also devote attention to legal protection of the public at points of special vulnerability, including consumer protection, commitment of the mentally ill and retarded, and landlord-tenant relationships. (CHK)

111. A DESIGN FOR THE STUDY OF MUNICIPAL BUREAUCRACIES

Main Investigator: Blanche D. Blank.

Status of Research and Publications: In process.

Agency: The City University of New York, Hunter College, Urban Research Center.

Previous Digest Report: None.

Research Problem. Conduct a systematic, comparative study of municipal bureaucracies.

Method of Study. The major features of the research design are: (1) characterization of a bureaucratic system in terms of basic operational inputs (manpower, organization, morale, leadership, and wealth), and two basic concepts of output (performance and satisfaction); (2) reduction of these elements to measurable variables; (3) methodological treatment of the items to arrive at comparative measures; and (4) exploration of the relationships among all these elements. (NS)

112. THE GOUVERNEUR ECONOMICS RESEARCH PROJECT

Main Investigators: Eleanor M. Snyder, Nora Piore, and Howard J. Brown.

Status of Research and Publications: In process.

Agency: The City University of New York, Hunter College, Urban Research Center, and New York City Health Services Administration, under sponsorship of U. S. Public Health Service and Beth Israel Medical Center.

Previous Digest Report: None.

Research Problem. New York City's Gouverneur Medical Service Program is an experimental program designed to find, in a particular neighborhood, more effective ways of unifying public health care services now provided in New York City by 25 separate agencies, and of coordinating those services now to be provided by private medical practitioners to public beneficiaries. Results of this program could lead to more effective utilization of all health resources in the city as a whole.

The current project is a study of health resource allocation, utilization, and costs in a low-income neighborhood in New York City to: (1) provide baseline information for the design of a comprehensive hospital-based municipal program to serve the residents of one low-income neighborhood, including those aspects of the program which involve care received by residents from private and nonprofit providers of care; (2) develop systematic statistical measurements for the continued development and evaluation of the program; (3) develop information and research procedures capable of broad application in planning medical care resource allocation and management for the city as a whole, taking into account multiple sources of financing and multiple providers of care--public, private, and nonprofit.

Previous Relevant Research. (1) Health Insurance Coverage in New York City, a report on the characteristics of the insured and uninsured, based on data collected by the Population Health Survey of the New York City Department of Health in 1964. (2) Metropolitan Medical Economics, a report on the scope, characteristics and role of public expenditures for medical care in New York City. (3) Public, Private and Philanthropic Expenditures for Dental Care in New York City, to be published shortly in The American Journal of Dental Public Health, and available on request in mimeographed form. (4) A Preliminary Classification of Tax-Supported Personal Health Care Services Administered by New York City Departments and Available to New York City Residents, 1965, an inventory of services available prior to enactment of such programs as Medicare and Medicaid. (5) Local Neighborhood Studies Gouverneur Medical Service Area, Population Statistics, 1960, Report No. 1, a report on the demographic, economic, and health-related characteristics of the population residing in the area that will be served by the new Gouverneur Hospital. (6) Measures of the Dimensions of Poverty in New York City, illustrations, at a community level, of some of the methodological and conceptual problems encountered in identifying and describing the local poor, and measuring the current incidence of poverty.

Method of Study. Gather data, from published and unpublished sources including medical, fiscal, and other records, on the health-related characteristics and health care requirements of the neighborhood's population, and on the level and distribution of currently available health services by type of provider. (2) Identify required data that cannot be obtained from existing sources and devise and employ methods of obtaining such data. (NS)

113. FISCALLY INDEPENDENT AND DEPENDENT CITY SCHOOL DISTRICTS

Main Investigators: T. Edward Hollander, Marilyn Gittell, and William S. Vincent.

Status of Research and Publications: In process.

Agency: The City University of New York, Research Foundation, in cooperation with Columbia University, Teachers College, The Institute of Administrative Research, under sponsorship of U. S. Department of Health, Education, and Welfare.

Previous Digest Report: None.

Research Problem. To define an optimum mode of operation for a city school district in its fiscal and administrative relations with state and municipal governments. The study will attempt to identify and measure significant differences, if any, among fiscally independent and dependent city school districts with respect to adequacy of school support, citizen control, citizen involvement and interest in school politics, and relationship of education costs to costs of other municipal governments.

Method of Study. (1) Classify city school districts by size and degree of fiscal independence, and measure and compare specific financial expenditures and political variables in relation to size of city and degree of fiscal independence. (2) On the basis of significant factors identified above, develop a research design and supplement it with interviews with federal, state, and local school and municipal officials, newspaper-item analysis, and review of municipal and state studies of school administration. (3) Implement research design by determining the locus of decision-making power and the role of the various participants. (JS)

114. COMMUNITY SERVICES RESEARCH AND DEVELOPMENT PROGRAM

Main Investigators: Harry A. Sultz, Edward F. Marra, William E. Mosher, John F. Fortune, and Lorraine Kramer.

Status of Research and Publications: In process.

Agency: State University of New York, Medical School, in cooperation with other University departments and the Erie County Department of Health under sponsorship of U. S. Department of Health, Education, and Welfare.

Previous Digest Report: None.

Research Problem. Recognizing the complexity, scope, and inter-relationships of community health problems, to explore the health needs and wants of the public, and the design and implementation of appropriate community services. (JS)

115. EXPLORATION OF MEDICAL-WELFARE PROJECT

Main Investigator: Jay F. Harris.

Status of Research and Publications: In process.

Agency: State University of New York, Upstate Medical Center, in cooperation with the Onondaga County Department of Social Welfare, under sponsorship of U. S. Department of Health, Education, and Welfare.

Previous Digest Report: None.

Research Problem. Explore the Medical-Welfare Center, proposed by the cooperating agencies, as a new approach to overcoming the medical and sociological barriers retarding the health improvement and independence of welfare-dependent families.

Method of Study. The Center would encompass an evaluation of the entire individual and the entire family. Both the physician and the case worker would be concerned, not only with medical needs, but also the emotional, social, and environmental milieu of the patient and his family and attempt to effectuate a coordinated medical-social program. (1) The structure of the Medical-Welfare Center will be studied and determined by this exploratory project. (2) The total out-patient health care to be provided by the Upstate Medical Center for a representative sample of 2,000 welfare-dependent individuals will be closely coordinated with total social casework services to be provided by the Department of Social Welfare. (3) The project will review the medical care and casework services available to welfare-dependent individuals within the community and define the program of the Center in relationship to community health and social agencies. (4) The project will develop the structure of the research unit to be associated with the Medical-Welfare Center. Together with consultants in the disciplines of social psychology, medical social work, biostatistics, medical economics, and public health, the study will explore the general areas of interest of each discipline and the direction of the methodology to be applied by the research unit in observing and analyzing the Medical-Welfare Center program. (JS)

116. STATE WATER POLLUTION CONTROL LAWS AND PROGRAMS

Main Investigators: Milton S. Heath, Jr., Daniel A. Okun, and J. K. Sherwani.

Status of Research and Publications: In process.

Agency: University of North Carolina, Institute of Government, under sponsorship of U. S. Department of Interior.

Previous Digest Report: None.

Research Problem. To compare the underlying laws and appraise the relative efficiency of selected state water pollution control programs in terms of economy, technical proficiency, political viability, and social and land use effects.

Method of Study. The research program includes: a comparison of relevant state legislation and case law; field studies of program administration in the case study states; and a series of analyses by social and physical scientists of pollution control programs or selected aspects thereof. Case study states will be selected to illustrate the principal alternative approaches now being applied, especially by the southeastern states. (MSH, Jr.)

117. DETERMINANTS OF CENTRAL SHOPPING AND RESIDENTIAL LAND VALUES

Main Investigators: R. N. S. Harris, G. S. Tolley, and Cleon Harrell.

Status of Research and Publications: Completed. Findings to be published in two journal articles. (Periodical not designated.)

Agency: North Carolina State University, Department of Economics, under sponsorship of Resources for the Future.

Previous Digest Report: None.

Research Problem. To develop and apply a theory of central land value, and to develop and apply a theory of residential land value.

Method of Study and Major Findings. The level and pattern of retail land values in a central business district is explained in terms of the space-time requirements of a purchase, trip generation to the area and walking times within the area. The price bid by any potential store operator for a square foot of space is hypothesized to be directly proportional to the mark-up of items sold and inversely proportional to the amount of space and time required for a customer to make a purchase. Sales volumes are directly related to pedestrian traffic in central areas, whose numbers are determined by basic demand factors including ease of access and the association economies of central stores. The theory of central land values was applied in a regression analysis of peak land values among cities. The sample of values was obtained by mail questionnaires from tax offices in 230 cities. A strong relationship was found between peak value and downtown work population which suggests the importance of a work-shopping trip combination. The next most important variable was per cent of sales of comparative shopping goods. There was one other significant variable, population, whose negative sign can be explained in terms of the emergence of substitute outlying shopping facilities as a city grows.

In developing a theory of residential land value, amenity values including subjective valuations of neighborhoods were introduced in a four-good consumer model. The four goods are amenity, lot size, leisure, and all other. Whereas previous theories have emphasized travel savings as a determinant of residential land value, the present theory explains residential land values as the sum of two components: travel savings and amenity. Consideration of amenity elements makes it possible to understand mixed magnitudes of bids for certain portions of land and why some families crosshaul to work and to shop. A suggested method of measuring the two components of land value was based on calculating a travel savings value by computing hypothetical travel cost if the household were located at the city's margin instead of its actual location. Travel savings allows an estimate to be made of amenity value by subtraction from actual land values. The residential land value theory was applied to the city of Raleigh, North Carolina. This was made possible by (1) a travel habits survey in the summer of 1964, and (2) cooperation of local tax officials in obtaining property value information. Separation of total land value into travel savings and amenity components was made for 20 neighborhoods at three different capitalization rates for travel savings and three different leisure valuations. The resulting amenity values per square foot were rather satisfactorily explained in a regression analysis in terms of the supply attributes: tenancy proportions, a resident status variable denoting upper-class dwellers, and a zoning variable indicating proximate nonresidential uses. A regression analysis with demand variables explained variations in amenity expenditure fairly well in terms of income measures and structure type preference, i.e. single house, duplex, apartment house, etc. Parallel regressions were carried out for household expenditures on lot size and travel, and income and family size were found to be the major explanatory variables. (RNSH, GST, and CH)

118. DEMAND ANALYSIS OF SELECTED RECREATIONAL FACILITIES ON NORTH CAROLINA FARMS

Main Investigator: E. C. Pasour.

Status of Research and Publications: In process.

Agency: North Carolina State of the University of North Carolina at Raleigh, Agricultural Experiment Station, under sponsorship of U. S. Department of Agriculture.

Previous Digest Report: None.

Research Problem. (1) Compile an inventory of existing farmer-owned and -operated recreational facilities on North Carolina farms. (2) Ascertain the demand for selected types of farmer-owned and -operated recreational facilities, and the respective price income elasticities of demand for such facilities. Interest in this area stems from the potential of recreational facilities to boost the economy in economically depressed areas, and to increase farm incomes through the introduction of on-farm recreational enterprises

Method of Study. The population to be studied will be determined from an inventory questionnaire. Farm owners and patrons of the recreational facilities studied will be interviewed. (JS)

119. LEGAL INTERVENTIONS, SOCIAL MOBILITY, AND DEPENDENCY--A STUDY OF PUBLIC ASSISTANCE IN HOUSING

Main Investigators: Kiyoshi Ikeda and Douglas S. Yamamura.

Status of Research and Publications: Data collection completed. Final report to be available August of 1967. Published and unpublished progress reports available without cost.

Agency: Oberlin College, in cooperation with the University of Hawaii, under sponsorship of U. S. Social Security Administration.

Previous Digest Report: 12:2-73.

Research Problem. To trace the interplay between legal-administrative interventions in family welfare and the behavior of recipient families in the movement out of dependency status.

Hypothesis. That the range and type of regulatory stipulations in housing assistance programs for low-income families significantly condition the mobility/achievement conduct and the control of dependency among low-income households.

Method of Study. To follow up long-term assessments (1952 and 1962) of diverse types of legal interventions in housing in Hawaii and in the city of Honolulu (in rent control and public housing programs). Archival and interview data are being interlinked over time for 1700 families who ever applied for housing assistance and/or were ever in four different types of assistance programs. Two of these programs have stipulated income limits, two represent programs without income limits. The novel program of permitting low-income households to develop a down payment reserve without income limits for a stipulated period is being assessed to determine whether this type of intervention with a clear and valued housing goal does encourage rapid movement out of both housing dependency and related dependency within the household. Time-linked statistical analyses will be employed to describe the patterns of mobility and immobility among recipient and non-recipient families.

Major Findings. Preliminary findings suggest that low-income households which have resources for social mobility are likely to be most affected by the absence or presence of income limits. In their presence, these families tend to cut back on both plans and actual conduct, develop related attitudes of negative evaluation of the operation of the rules, and engage in violations of specific rules. Families with fewer resources for mobility also seem to condition their outlook and behavior on the basis of the limiting effects on the more mobile families. In the no-income-limit programs, as in the down payment

reserve plan, families which did cut back at an earlier period increased their labor force participation, occupational moves, and income levels in a positive direction. (DSY)

120. FEASIBILITY OF CENTRALIZING HEALTH PLANNING INFORMATION

Main Investigators: Emmett W. Arnold and R. Eugene Wehr.

Status of Research and Publications: In process.

Agency: State of Ohio, Department of Health, under sponsorship of U. S. Department of Health, Education, and Welfare.

Previous Digest Report: None.

Research Problem. Determine the feasibility of establishing a central health planning information program. The need is evident by the increasing complexity of the information requirements for planning decisions. These include requirements presented by such federal legislation as Appalachia, Hill-Burton, Mental Health and Mental Retardation, and Vocational Rehabilitation, as well as state responsibilities in regard to licensing and other standards, forecasting of various service requirements such as hospital and related health facilities, and special education. There is an increasing number of requests for health planning information by governmental and voluntary service and planning agencies.

Method of Study. Review existing sources of health planning information and systems of collection, analysis, and use; review the statutory requirements for reporting specific items of information determined to be essential for planning; determine which of the specific systems of data collection, analysis, and publication should be centralized to best meet the needs of various governmental and voluntary planning and service agencies; and design a future plan of operation. Anticipated publications include an inventory of statutory requirements and one on sources of health planning information. (EWA)

121. EVALUATION OF A NEIGHBORHOOD CENTER PROGRAM

Main Investigators: Joseph Crymes, Byron Munson, and Robert Pankin.

Status of Research and Publications: In process.

Agency: Ohio State University, Center for Community and Regional Analysis.

Previous Digest Report: None.

Research Problem. To measure and evaluate the effectiveness of Columbus, Ohio's Neighborhood Center Program.

Method of Study. Panel analysis will be used to measure change in neighborhood residents, clients of the Center, and various personnel working in the program. Such variables as crime and delinquency rates, school drop-outs, alienation, and family cohesion will be examined. Various baseline surveys will be made and continuing observation of Center activities conducted. (BM)

122. RESIDENTIAL ENVIRONMENT

Main Investigators: Byron Munson and Ira J. Silverman.

Status of Research and Publications: In process.

Agency: Ohio State University, Center for Community and Regional Analysis.

Previous Digest Report: None.

Research Problem. To measure the residential adjustment problem in public housing.

Method of Study. The program is divided into four phases. (1) Determine the basic factors associated with residential adjustment. (2) Measure the impact of a minimally adequate public housing environment on the inhabitants. (3) Design and construct an optional low-cost residential environment based on data gathered in the first phase and that available from other studies. (4) Measure the impact of the model environment on its residents and compare its impact with that of the minimally adequate environment. (BM)

123. PATTERNS OF COMMUNITY HEALTH SERVICES

Main Investigators: Wilson D. Steen and Thomas C. Points.

Status of Research and Publications: In process.

Agency: University of Oklahoma, Medical Center, Bureau of Public Health Research, under sponsorship of U. S. Department of Health, Education, and Welfare.

Previous Digest Report: None.

Research Problem. An exploratory study to formulate hypotheses for new approaches to the organization of community health services, taking into account the differences in community needs and resources that appear to exist between the various types of communities: rural, rural-urban, urban-suburban, metropolitan, and megalopolis. (JS)

124. THE POLITICAL ENVIRONMENT OF EDUCATION

Main Investigator: Harmon Zeigler.

Status of Research and Publications: In process.

Agency: University of Oregon, Center for the Advanced Study of Educational Administration, under sponsorship of U. S. Department of Health, Education, and Welfare.

Previous Digest Report: None.

Research Problem. Study communication between legislators and lobbyists in Oregon, Utah, Massachusetts, and North Carolina to discover the kinds of legislators most likely to support education.

Method of Study. The states were selected to provide a maximum of cultural, political, economic, and social variety. Legislators and lobbyists in these states were interviewed. The interview schedules emphasized: (1) the personality of legislators and lobbyists (measured by the Edwards Personal Preference Schedule); (2) the extent to which information about education is exchanged by participants in the legislative process; (3) perceptions by legislators and lobbyists of influential interest groups; (4) perceptions of the most effective techniques for conveying information; (5) differences in the recruitment of legislators and lobbyists; and (6) emerging patterns of interpersonal relationships between legislators and lobbyists. The basic outcome is the extent to which expenditure of funds for education varies with each set of interactions. (HZ)

125. WATER POLLUTION CONTROL: YAQUINA BAY, OREGON

Main Investigator: E. N. Castel.

Status of Research and Publications: In process.

Agency: Oregon State University, Agricultural Experiment Station, under sponsorship of the State of Oregon.

Previous Digest Report: None.

Research Problem. Using Yaquina Bay as a case study: (1) Identify the items of economic value that will be sacrificed if pollution is not controlled. (2) Determine unit prices and physical quantities of those items. (3) Determine the cost of alternative engineering plans designed to provide varying degrees of pollution control. (4) Relate the above variables in a mathematical model that will permit the unknown physical, biological and economic data to be isolated. (5) Relate the unknown variables to needed research in the physical, biological, and economic fields. (JS)

126. THE CULTURAL ECOLOGY OF SUBSISTENCE AGRICULTURE: PRODUCTIVE TECHNOLOGY, ENVIRONMENT, AND SOCIAL ORGANIZATION IN THREE SOCIETIES OF THE JOS PLATEAU, NIGERIA

Main Investigator: Robert M. Netting

Status of Research and Publications: In process.

Agency: University of Pennsylvania, Department of Anthropology, in cooperation with University of Ibadan (Nigeria), Nigerian Institute of Social and Economic Research, under sponsorship of Social Science Research Council

Previous Digest Report: None.

Research Problem. To determine the relationship of the habitats and agricultural systems of the Kofyar, Sura, and Goemai peoples in Nigeria, to demography, labor organization, and land tenure. The three contiguous groups are close linguistic relatives but differ markedly in culture and environment. The Sura live on the high plateau and practice shifting cultivation, the Kofyar are intensive terrace farmers on the escarpment and adjoining plain, while the Goemai are shifting cultivators living in a kingdom state on the plains.

Previous Relevant Research. Field research by the investigator in 1960-62 which resulted in papers on Kofyar agriculture, cultural ecology, and the relationship of household organization to subsistence activities.

Hypothesis. Intensive agriculture is functionally related to high population density, nuclear family household organization, and individual land tenure.

Method of Study. Participant observation, household censuses, tabulation of production and productivity, and household budgets. (RMN)

127 EVALUATION OF RECREATION BENEFITS ASSOCIATED WITH WATER QUALITY OF THE DELAWARE ESTUARY

Main Investigators: Anthony R. Tomazinis and Iskandar Gabbour.

Status of Research and Publications: The project is divided into two phases. Completion of a draft report of Phase I expected by December 30, 1966. Research on Phase II in process. Final report to be published as a manuscript by the Institute for Environmental Studies, spring of 1967

Agency: University of Pennsylvania, Institute for Environmental Studies, under sponsorship of Delaware Estuary Comprehensive Study of the Water Pollution Control Administration, U. S. Department of the Interior.

Previous Digest Report: 13:1-172.

Research Problem. To identify and quantify all the potential recreation benefits expected for the Delaware Estuary area, in case the water quality of the Delaware River is restored to various levels of its natural condition.

Previous Relevant Research. "Metropolitan Open Space from Natural Process," Institute for Environmental Studies, University of Pennsylvania, 1965. A method of estimating metropolitan outdoor recreation needs on the basis of a "mean park distance" was developed during this project. The concepts of the method were used as the starting point of this project.

Method of Study. The benefits are based primarily upon estimates of existing and future demand for water-oriented recreation activities in the estuary area. Manifest and latent demand were discussed and projected for 1976 and 2000. Four activities were analyzed: swimming, boating, fishing, and picnicking. Individual demand estimates were developed for each of five levels of future water quality specified by DECS. Aesthetic appreciation and neighborhood improvements were also considered but not quantified. For each level of water quality, the potential benefits (using a range of benefit rates) were estimated by type of recreation activity. Park locations along the river have been identified for each alternative. An examination of the relationship between these parks and existing parks was made for the purpose of offering a comprehensive regional park system. The system was analyzed through a model relating the airline distance between each of the parks in the system and the concentrations of population in the study area, to the potential visits to the regional park system.

Major Findings. The study area will exhibit tremendous growth in participation in water-oriented recreation. The use of the Delaware River for recreational purposes is expected to produce a level of participation between nine and twenty-two million activity days in 1976, and between ten and thirty-eight million activity days in 2000, depending upon which of the five alternatives is followed. These levels of participation, when converted into average net benefits, amount to a variation between six and seven million dollars in 1976, and between eleven and thirty-two million dollars in the year 2000. The choice of the level of benefits to be pursued or, correspondingly, the level of water quality improvement to be achieved, would depend upon the costs associated with each level of improvement, as well as on other benefits. (ART and IG)

128. TECHNIQUES FOR ESTIMATING AND MEETING OPEN SPACE NEEDS FOR A METROPOLITAN REGION

Main Investigators: Ian L. McHarg, William G. Grigsby, William Roberts, Ann Louise Strong, Anthony R. Tomazinis, and Nohad A. Toulan

Status of Research and Publications: Completion expected in 1966

Agency: University of Pennsylvania, Institute for Environmental Studies, under sponsorship of State of New Jersey, Department of Conservation and Economic Development, and Commonwealth of Pennsylvania, State Planning Board

Previous Digest Report: None.

Research Problem. Develop methods for estimating open space requirements, study economic and legal methods of control, economic consequences, and design implementation techniques. Apply those methods to the Philadelphia Metropolitan Region in New Jersey and Pennsylvania in relating the role of open space to the preservation of the character of the urban area and prevention of future deterioration of this area. (DAW)

129. PRIVATE OPEN SPACE AND PUBLIC BENEFIT

Main Investigator: Ann Louise Strong.

Status of Research and Publications: In process.

Agency: University of Pennsylvania, Institute for Environmental Studies, in cooperation with Chester County Water Resources Authority, U. S. Geological Survey, Regional Science Research Institute, and Ford Foundation.

Previous Digest Report: None.

Research Problem. To test the following newly developed legal techniques for preserving the natural character of land and limiting the intensity of its use while keeping the land in private use: conservation easements, purchase and resale with development controls, purchase and lease with development controls, compensatory regulations, and installment purchase.

Method of Study. A portion of the basin of the East Branch of the Brandywine located above Downingtown has been chosen as the demonstration site. Approximately 14,000 acres, or 60 per cent of the basin, will be regulated so that they will be maintained in open space uses. Starting at the headwaters of the stream, the area will be delineated to include the land of most significance to the hydrologic cycle, flood plains and adjacent steep slopes being particularly important. The stream is now healthy, with few pollution sources. The comprehensive plan for the Brandywine includes two small watershed dams within the area of the demonstration. The area also will be delineated so that it includes land with a broad range of values and development pressures. A second basin with similar characteristics has been selected as a statistical control area. The demonstration will (1) observe the effects upon the water resource system and ecology of controlling land use in portions of the basin, particularly as compared with effects of a normal pattern of urbanization in a similar stream basin; (2) observe the effects upon land values within the regulated area, and upon land values and urban development patterns in the remainder of the watershed and in nearby areas; (3) observe the effects of land-use controls on the quality of living of residents within and near the stream basin; (4) evaluate the benefits from the observed effects and compare them with costs; (5) observe and evaluate shifts in attitudes and actions of cooperating civic and governmental groups; (6) evaluate each legal technique as to benefits, costs, efficacy, and acceptability to landowners and administering agencies. (ALS)

130. PUBLIC HEALTH SYSTEMS RESEARCH PROJECT--PROGRAM EVALUATION OF LOCAL
PUBLIC HEALTH DEPARTMENTS

Main Investigators: Dennis J. Palumbo, John J. Hanlon, Adele Hebb, and
Oliver P. William.

Status of Research and Publications: In process.

Agency: University of Pennsylvania, Fels Institute of Local and State
Government, Brooklyn College of the City University of New York,
Philadelphia Department of Public Health, and Public Health
Departments of Detroit and Wayne County, under sponsorship of
U. S. Department of Health, Education, and Welfare. The head-
quarters of the project (Public Health Systems Research Project)
is located at 1481 Flatbush Avenue, Brooklyn, New York 11210.

Previous Digest Report: None.

Research Problem. To determine the extent to which and ways in
which organizational and administrative structures and behavior influence
the nature and effectiveness of local public health practices in the
United States. It seeks to discover what methods of organization and
administration (1) most significantly contribute to the maximization of
input-output ratios in local public health services, and (2) are most
significantly related to differences in the responses of local public
health departments to the community conditions in which they operate.

Method of Study. Use of statistical analysis and case studies of
the quantitative and qualitative relationships among the following vari-
ables. Independent Variables: health department organizational and
administrative characteristics such as span of control, formal centrali-
zation-decentralization, styles of management, goal perceptions, morale,
professionalization, generalization vs. specialization, and communica-
tions networks. Intervening Variables: community characteristics such
as method and amount of financing, population characteristics, community
type, community perception and interest group aggregates, and how these
variables and their interrelationships affect the following two Dependent
Variables: input-output ratios (e.g., program productivity) and variations
in health agency responses to differences in community conditions. (DJP)

131. DETERMINANTS OF COORDINATION FOR PLANNING

Main Investigators: Conrad Seipp, Ray H. Elling, and Edward A. Suchman.

Status of Research and Publications: In process.

Agency: University of Pittsburgh, Graduate School of Public Health, under
sponsorship of U. S. Department of Health, Education, and Welfare.

Previous Digest Report: None.

Research Problem. An exploratory field study to identify and analyze the major factors which influence coordination for planning an action program.

Method of Study. Investigation will be directed to the experience of the states in using the Mental Retardation Planning Grants made available in recent federal legislation. Various approaches pursued by the states to achieve greater coordination will be identified. A sample of states will then be selected for more intensive field study. Devices developed to measure the degree of coordination achieved and the hypotheses generated by this analysis will then be tested through further investigation within the states and territories preparing plans for comprehensive action to combat mental retardation: (CS)

132. CHRONIC RESPIRATORY DISEASE IN AN INDUSTRIAL TOWN

Main Investigators: I. T. T. Higgins, Millicent W. Payne, and Michael D Lockshin.

Status of Research and Publications: In process.

Agency: University of Pittsburgh, Graduate School of Public Health, under sponsorship of American Medical Association Education and Research Foundation, Committee for Research on Tobacco and Health.

Previous Digest Report: None.

Research Problem. In 1957, chronic respiratory disease was studied in a random sample of men living in an industrial English town. This current project will reexamine the original men and examine a new random sample from the same town, with the purpose of relating respiratory symptoms, lung function, and X-ray appearances to such personal and environmental factors as tobacco smoking and exposure to dust and chemicals. The new sample is designed to reveal any cohort effect and to help discriminate between the effects of aging and experiences associated with the passage of time. In addition, the prognostic implication of respiratory symptoms, level of lung function, and X-ray appearances will be assessed for the original sample in terms of morbidity, mortality, and deterioration of lung function over the nine-year period. (JC)

133 EFFECTS OF ZONING CHANGE ON PROPERTY VALUES IN TWO PITTSBURGH SUBURBS

Main Investigator: David R. Seymour.

Status of Research and Publications: Research completed. Report to be submitted to Urban Land Institute in late 1966.

Agency: University of Pittsburgh, Graduate School of Public and International Affairs, under sponsorship of Urban Land Institute.

Previous Digest Report: None.

Research Problem. Analyze the effects of zoning change on property values in two Pittsburgh suburbs.

Method of Study. A method for filtering out zoning change effect from other variables, such as regional economic growth or national business cycles, was developed and tested on two communities in the Pittsburgh area. Property values per 1,000 square feet were obtained from two Pittsburgh suburbs on a sampling basis. Observations for both rezoned and unchanged properties and unchanged properties were compared statistically to determine what kinds of zoning changes produced measurable effects, and in what types of communities changes in zoning and associated changes in property values were statistically significant.

Major Findings. Of twelve possible basic zoning change combinations, eight were present in the study areas. Of the eight, only three had mean changes significantly greater than those in control groups. All three of these changes were found in a rapidly developing suburban area. The remaining study area did not produce significant results. Two general conclusions are drawn. First, zoning changes will not affect property values unless the present zoning is constraining demand for more capital intensive uses, or unless future zoning will constrain market demand. Second, relative changes in property values associated with zoning changes occur in the direction of intensity of capitalization of permitted uses. (DRS)

134. THE URBAN DEVELOPMENT "ENTERPRISE"

Main Investigator: George S. Duggar.

Status of Research and Publications: In process. Completion expected in 1968.

Agency: University of Pittsburgh, Graduate School of Public and International Affairs, Department of Urban Affairs

Previous Digest Report: None.

Research Problem. To describe a genus of administrative action which is not organizational management, but rather is the concerting of several formal organizations in purposeful activity. To identify this genus, describe it "anatomically," "physiologically," and "taxonomically."

Previous Relevant Research. This research relates to previous research published by the investigator in 1961 when "the urban renewal enterprise" was identified as an example approximating an ideal type. (GSD)

135. BRINGING FAMILY PLANNING TO THE POOR

Main Investigators: Robert H. Hardt, Philip L. Ferro, George E. Bodine, and Elizabeth J. Thompson.

Status of Research and Publications: In process.

Agency: Planned Parenthood Center (Syracuse), under sponsorship of U. S. Department of Health, Education, and Welfare.

Previous Digest Report: None.

Research Problem. To measure the extent to which low-income families make increased use of a family planning clinic when two modifications in current operating practices are introduced: (1) decentralization of services; (2) the development of a special educational campaign directed toward low-income groups.

Method of Study. Changes in clinic usage will provide the basic measure of the relative effectiveness of the combined innovations and the educational campaign alone. The effectiveness and efficiency of two types of educational campaigns will be compared. One campaign will rely solely on a series of mass mailings, while the second will also incorporate personal contact and a meeting with a specially trained neighborhood worker. Through follow-up interviews with new patients, attempts will be made to determine how the clinic services were evaluated, whether recommended practices were adopted, and the degree to which information about clinic services and family planning practices was diffused. (JS)

136. ELASTICITY OF TAXES ON INCOME IN PUERTO RICO AND JAMAICA

Main Investigator: Irma G. Tirado.

Status of Research and Publications: Completed. Publication by the Institute of Caribbean Studies scheduled for December, 1966.

Agency: University of Puerto Rico, Institute of Caribbean Studies, with funds from Ford Foundation.

Previous Digest Report: None.

Research Problem. Analyze the relation between income growth and income taxes in two Caribbean areas, Puerto Rico and Jamaica, both of which have undergone rapid economic development.

Method of Study. Analyze the general composition of public revenues, and the income tax and industrial incentive laws. Measure the income elasticity of personal and corporate income taxes.

Major Findings. The sensitivity of the yields of these taxes to changes in the national income, gross domestic product, and the personal income, is quite high. The study explains the factors which cause variation in this sensitivity between Puerto Rico and Jamaica. (SL)

137. MATERNAL AND CHILD HEALTH RESEARCH PROGRAM

Main Investigators: Antonio S. Medina, Edmundo Alfonso Ribera, Hector Garcia Cabrera, Virginia Martinez, and Miguel A. Cintron.

Status of Research and Publications: In process.

Agency: University of Puerto Rico, School of Medicine, Department of Preventive Medicine and Public Health, under sponsorship of U. S. Department of Health, Education, and Welfare.

Previous Digest Report: None.

Research Problem. To study the utilization and quality of tax supported prenatal care and services in Puerto Rico for use in future planning of these programs at various levels.

Method of Study. Eight thousand women are being interviewed within a month after delivery to determine the factors affecting their utilization of prenatal services in Puerto Rico. Those women who used tax supported services are subjected to a more extensive interview. The interview is designed to determine what motivated them to use the services, their opinions of the services, why they discontinued using the services in such cases, and similar questions. Pertinent data are also obtained from the clinical prenatal records of women having utilized tax supported services. (ASM)

138. INTERAGENCY RELATIONS IN PROVISION OF HEALTH SERVICES

Main Investigators: Robert L. Eichhorn and Jere A. Wysong.

Status of Research and Publications: In process.

Agency: Purdue University, under sponsorship of U. S. Department of Health, Education, and Welfare.

Previous Digest Report: None.

Research Problem. Study the organization of medical care for the control of tuberculosis in a metropolitan area to determine how interagency relations affect the entire control process, including the diagnosis of tuberculars, their initiation into the treatment cycle, their referral from agency to agency, and the quality and comprehensiveness of care provided.

Hypothesis. Much of what is known medically about tuberculosis control fails to be translated into practice because of inadequacies of inter-agency coordination.

Method of Study. Tuberculosis control was chosen because it may involve virtually all community health and health-related agencies. The Calumet region of Indiana will be the study site. Agency relations that affect success or failure in controlling tuberculosis in the region will be analyzed in terms of exchange, power, and adaptations. This study is the first of a series designed to investigate the operation of community health organizations in the Calumet region and suggest means for their improvement. (JS)

139. INDUSTRIALIZATION AND URBANIZATION

Main Investigators: Leonard Z. Breen and N. Sethuraman.

Status of Research and Publications: In process.

Agency: Purdue University, Department of Sociology, in cooperation with Indiana Institute of Technology, Kanpur, India, and Department of Industries, State of Uttar Pradesh, India.

Previous Digest Report: None.

Research Problem. To discover the link between rates of industrial development, location of industry, urban growth, and significant factors affecting these interrelated patterns.

Method of Study. Interviews were conducted with the responsible management official in each of 1,400 factories in Kanpur, India. The date of establishment, size, location, products, investment, and other pertinent data were collected and analyzed. (LZB)

140. THE IMPACT OF URBAN, PLANNED SOCIAL CHANGE ON NORMAL PATTERNS OF INVASION AND SUCCESSION

Main Investigators: Leonard Z. Breen and Jacqueline Rudolph.

Status of Research and Publications: In process.

Agency: Purdue University, Department of Sociology.

Previous Digest Report: None.

Research Problem. In a city effecting a renewal program, determine the effect of planned change in land use and population type upon the city's normal patterns of migration.

Method of Study. The city studied was Akron, Ohio, where a renewal program has begun to affect natural patterns of migration. The population group being directly affected was followed from initiation of the urban project, through completion of movement, and beyond to the process of adjustment in the new environment. Relocation procedures in terms of negative or positive contributions to certain migration tendencies, and the role of urban renewal in changing normal patterns of invasion and succession are being evaluated. (LZB)

141. DESIGN OF A METROPOLITAN SEWER SYSTEM MODEL

Main Investigator: Jon Liebman.

Status of Research and Publications: In process. Report to be published and available at the conclusion of the model design, after mid-1967.

Agency: Regional Planning Council (Baltimore), under sponsorship of U. S. Department of Housing and Urban Development.

Previous Digest Report: None.

Research Problem. At the present time, it is not possible to determine quickly the effects of a planned future land-use distribution on an existing or proposed metropolitan sewer system. It is becoming increasingly imperative to develop an analytical procedure capable of evaluating alternate sewer systems within a land-use plan, or evaluating the sewer system implications for alternate land-use plans. Development of a mathematical model useful in the planning process requires two distinct steps: (1) Articulation of an analytical framework and design of an appropriate model. (2) The empirical development of the model and a set of computer programs or procedures to implement the model. This project will deal with the concept formulation or design phase of the model only. The report will contain a detailed specification of an analytical framework and procedure by which an operational sewer model could be implemented.

Method of Study. (1) Survey, organize, and consolidate any previous analysis of factors influencing the scale, location and scheduling of sewer lines and treatment plants. (2) Formulate appropriate policy questions on the planning of sewer systems, such as number needed, locations where they are needed, and cost. (3) Develop cost/demand relationships for the major aspects of a sewer system, such as collection, transportation, treatment, and disposal. (4) Designate the specifications of the model. This will be based on results of earlier steps. A technical report will be published giving the framework of the proposed model and specific algorithms to be used in its development. It will also include the types of data required for the model, as well as sufficient detail to provide basis for estimating the effort and the cost associated with applying the proposed model to a planning program. Finally, the specifications will include a detailed cost estimate for the development and testing of a set of computer programs to implement the model. (PSC)

142. PROGRAMMING METROPOLITAN HOSPITAL GROWTH

Main Investigators: Ronald E. Miller and Jerry B. Schneider.

Status of Research and Publications: In process. Some preliminary results reported in J. Schneider, "Planning the Growth of a Metropolitan System of Public-Service Facilities: the Case of the Short-Term General Hospital," unpublished doctoral dissertation, Department of Regional Science, University of Pennsylvania, 1966.

Agency: Regional Science Research Institute (Berkeley Office).

Previous Digest Report: None.

Research Problem. To develop and test empirically a technique for measuring and explaining the relative "accessibility" and "attractiveness" of individual hospitals to various patient groups for the purpose of locating additional hospital capacity. (JBS)

143. PLANNING AND DESIGN OF FACILITIES TO HOUSE CURRENT TRENDS IN INSTRUCTIONAL METHODS AND TECHNOLOGIES

Main Investigators: Alan C. Green, Wayne F. Koppes, and M. C. Gassman.

Status of Research and Publications: Completed. Final reports forwarded to U. S. Office of Education. The series, titled Educational Facilities With New Media, includes Report A - "A Guide for Policy Makers," Report B - "A Guide for the Design Profession," and Report C - "A Technical Guide."

Agency: Rensselaer Polytechnic Institute, School of Architecture, Center for Architectural Research, under sponsorship of U. S. Department of Health Education, and Welfare.

Previous Digest Report: 12:2-108.

Research Problem. Development of planning and design guidance for all types of facilities at all levels of education in which learning media are to be utilized effectively. (ACG)

144. FIRE PROTECTION STANDARDS AND METHODS FOR NURSING HOMES, HOUSING FOR THE ELDERLY, AND MULTIFAMILY DWELLINGS

Main Investigator: Not reported.

Status of Research and Publications: In process. A planning document on housing for the elderly to be prepared for FHA dissemination.

Agency: Rensselaer Polytechnic Institute, School of Architecture, Center for Architectural Research, under sponsorship of the Federal Housing Administration.

Previous Digest Report: None.

Research Problem. Develop recommendations for revising the FHA minimum property standards and formulate general guidance in planning for fire protection. Particular emphasis is being placed on life safety for occupants.

Method of Study. A statistical basis for final recommendations will be developed, in part, by the analysis of a thousand or so records of fires. The project includes a study of major building codes, state licensing and regulations, and the effectiveness of early warning devices for fire detection. (ACG)

145. SMALL GROUPS, NETWORKS, AND SOCIAL CHANGE IN AFRICA

Main Investigators: Alfred Harris and David Jacobson

Status of Research and Publications: In process.

Agency: University of Rochester, under sponsorship of U. S. Department of Health, Education, and Welfare.

Previous Digest Report: None.

Research Problem. To study, in a particular town, changes in social relationships often associated with the movement of people to the urban centers of sub-Saharan Africa. The urban-based status and stratification systems, and the roles of small groups and social networks are being examined closely. Much of the research about Africans in towns has emphasized the integrative roles of the more formal secondary associations. This project focuses on the relevance of small groups and networks as building blocks of social organization during the process of social change. (JS)

146. HYDROLOGY OF SUBURBAN AREAS

Main Investigators: Kurt Nathan, Russell B. Alderfer, A. Vaughn Havens, George H. Nieswand, V. P. Chaudhary, and Bennett Smith.

Status of Research and Publications: In process.

Agency: Rutgers - The State University, College of Agriculture and Environmental Science, under sponsorship of U. S. Department of the Interior

Previous Digest Report: None.

Research Problem. Determine: (1) the effect of land-use change on the rainfall-runoff relationship on small watersheds in Central New Jersey, as the land changes from agriculture and forestry to suburban

development; (2) the impact of this change on local water resources; (3) the best practices for proper conservation of existing water and soil resources in agricultural areas undergoing suburban development.

Method of Study. Rainfall will be measured by recording rain gauges with punched paper tape output, and runoff by stage recorders with punched paper tape output. It is hoped that precise lag time relationships can be developed. Pertinent parameters of the watershed will be determined from available aerial photographs and contour maps. Surveillance on land use will be kept by inspection. (KN)

147. NEW JERSEY SENIOR SERVICE CORPS

Main Investigators: Marshall Stalley and Virginia Whitney.

Status of Research and Publications: In process. Termination scheduled for June 30, 1969.

Agency: Rutgers - The State University, Urban Studies Center, under sponsorship of U. S. Department of Health, Education, and Welfare.

Previous Digest Report: None.

Research Problem. Test the feasibility of the proposed national senior service corps by establishing, on a state-wide basis in New Jersey, a "senior service corps" matching available skills of older persons with jobs and roles which need to be performed in community organizations and urban service work.

Method of Study. Non-residential training will be provided by Rutgers through its Urban Studies Center and Extension Division to develop a model program for use by other educational institutions and national, state, and local private and public service agencies throughout the country. Jobs will be provided on a part-time basis to the trainee-participants (corpsmen) and placements made in state and local public agencies and voluntary non-profit corporations. Corpsmen will receive a stipend of \$100 a month while enrolled as trainee-participants. A doctoral candidate in social science will serve as process observer. Training will include participation in a seminar on urban issues and guided group discussion and inter-action for a group of persons over 55 years of age--20 participants the first year, 25 the second, and 30 the third. (MS)

148. THE RELATION OF PRE-PLANNED COMMUNITY DEVELOPMENT TO LOCAL GOVERNMENT BOUNDARIES IN SAN DIEGO COUNTY

Main Investigators: W. Richard Bigger, James D. Kitchen, Robert F. Wilcox, Don B. Leiffer, Gary Vyne, and Robert Small.

Status of Research and Publications: In process.

Agency: San Diego State College, Public Affairs Research Institute.

Previous Digest Report: None.

Research Problem. To determine how local jurisdictional boundaries are related to San Diego County pre-planned community development and service needs, and how such jurisdictions might be established or altered to become compatible with these needs. San Diego County has seen increased developer interest in construction of entire new communities as opposed to "subdivisions." By locating themselves generally away from urban core areas (generally to achieve the larger, cheaper parcels of land), many of these developments have found themselves in a tangled maze of city, county, and special district jurisdictions.

Method of Study. Twelve pre-planned community areas in various stages of development have been identified in the County. After a study of the present and potential jurisdictional pattern problems of these communities, the project will suggest standards to guide local authorities (both planning and administrative) in their consideration of boundary changes, incorporations, annexations, creation of special districts, and consolidation and dissolution of entities. (WRB)

149. THE VIRGINIA CITY

Main Investigator: Chester Bain.

Status of Research and Publications: Completion expected in 1967.

Agency: University of South Carolina, Department of Political Science and the Institute of Government.

Previous Digest Report: None.

Research Problem. Study and analyze: (1) the history of classification of Virginia municipal corporations from the colonial period to the present; (2) the basis for city-county separation in Virginia; and (3) the procedures for and general effects of municipal incorporation in Virginia. (JS)

150. NEW CONCEPTS AND TECHNOLOGIES FOR THE HOUSING INDUSTRY

Main Investigators: William K. Wittausch, Robert W. Lillie, Robert L. Lundy, Richard L. Martin, and D. Sam Scheele.

Status of Research and Publications: In process.

Agency: Stanford Research Institute (South Pasadena).

Previous Digest Report: None.

Research Problem. Provide a basis for restructuring the nation-wide housing industry through development of new concepts and technologies. Emphasis will be on methods, not materials.

Method of Study. Identify the factors and principles governing function, content, performance, and dimensional standards for interfaces of housing components. (2) Seek innovations in methods, tools, and equipment for installing manufactured components designed to produce different types of dwellings on a variety of independently prepared building sites. (3) Consider new ways to market and physically distribute housing components for both new construction and existing dwellings on a nation-wide basis. (4) Study the changes in procedures necessary to assure more efficiency in financing housing and land and in transferring ownership and occupancy rights to assure better utilization of housing inventory. (WKW)

151. DETERMINANTS OF EDUCATIONAL EXPENDITURES IN LARGE CITIES OF THE UNITED STATES

Main Investigators: H. Thomas James, James A. Kelly, and Walter I. Garms.

Status of Research and Publications: Completed. Published by the investigators under the above title, Cooperative Research Project No. 2389 (1966), School of Education, Stanford University.

Agency: Stanford University, School of Education, under sponsorship of U. S. Department of Health, Education, and Welfare.

Previous Digest Report: 12:2-114.

Research Problem. Examine the processes by which resources are allocated to the support of public education in large cities in the United States.

Previous Relevant Research. Two previous studies in this series were H. Thomas James, School Revenue Systems in Five States, Cooperative Research Project No. 803 (1961); and H. Thomas James, et al., Wealth, Expenditures, and Decision-Making for Education, Cooperative Research Project No. 1241 (1963).

Method of Study. This study was developed in three parts: (1) historical review of the development of 14 large cities and their public schools; (2) examination and description of budget processes in the 14 city school districts; (3) a statistical analysis revealing the relationship between expenditures per pupil and measures of the three sets of determinants of educational expenditures. A sample of 107 large school districts was used for the statistical analysis. Data were obtained from U. S. census sources and from local and state government officials.

Major Findings. A decline was noted in the ability of the cities to support the cost of governmental services. The full market value of taxable property per capita increased in 15 selected cities between 1930 and 1960 by

amounts ranging from 6 to 201 per cent, but these increases lagged behind rises in the cost of education and other governmental services in the same cities. Also, the ratio of assessed valuation to full market value of taxable property declined. Evidence was also found of a relative decline in the "human capital" of the cities. In 1940, 39 of the 130 largest cities were at or below the median for their states in median years of schooling of the adult population; in 1960, 58 cities were below the median of their states. This decline in "human capital" and the decline in the cities' financial ability to support governmental services give added significance to one of the policy implications of this study. The availability of revenue is the most important determinant of social policy for education in American cities. Until means are found to reverse that equation, letting social policy determine revenues to be allocated to education, the cities face grave problems.

It was found that three major reference groups put pressure on boards of education during budget processes: the clientele of the school and school employees, both supporting higher expenditures; and economy or efficiency groups who resist increases in the level of expenditures. The principal function of big city boards of education during the budget process, then, is to balance these conflicting pressures placed upon it. Hemmed in by a growing body of state regulations, state-mandated services and levy limitations, salary schedules and other staff benefits, the typical board of education may become partially immobilized, and thus only attempt relatively minor adjustments in the school budget during the brief time it is before the board.

A number of governmental variables were hypothesized to be important in determining the level of educational expenditures. These variables, representing measures of governmental arrangements for decision-making, were combined with the socio-economic characteristics measuring expectation for educational services and ability to support education; they were treated as independent variables, whose relationship to the dependent variable, educational expenditures, was examined through multiple regression analysis. Using only the ability-demand variables, a multiple correlation coefficient of .84 was obtained, indicating that these variables explained 71 per cent of the variation in the criterion variable. Using ability-demand and governmental variables, the multiple correlation coefficient was .85, indicating that 73 per cent of the variation was explained. The high multiple correlation coefficient obtained from the basic ability and demand variables confirms the utility of those measures in explaining variations in educational expenditures. On the other hand, it is clear that the measures of governmental arrangements used in this study contributed little to an explanation of the variation in expenditures. (HTJ)

152. PUBLIC DECISION-MAKING AND POLITICAL PARTICIPATION IN A MEXICAN CITY

Main Investigators: William S. Tuohy and Richard R. Fagen.

Status of Research and Publications: Field research completed. Data analysis in process. Findings to be published as a book in 1968.

Agency: Stanford University, Department of Political Science, in cooperation with the Colegio de Mexico and the Universidad Veracruzana, under sponsorship of Ford Foundation.

Previous Digest Report: None.

Research Problem. To study the processes of community decision-making, using specific issue foci, and to study the political culture of the general population and of certain key persons among the community's elite.

Method of Study. The research site was Jalapa, capital of Veracruz. Local decision-makers and well-informed persons were interviewed. A political culture questionnaire was administered to members of the elite and to a sample of the general population. (WST)

153. POLICIES AND POLICY-MAKING IN LARGE CITY EDUCATION SYSTEMS

Main Investigators: Alan K. Campbell and authors listed below.

Status of Research and Publications: Field work and statistical analyses completed. The following books to be published by Syracuse University Press: Jesse Burkhead, Thomas Fox, and John Holland, Input-Output Relationships in Large City High Schools; Alan Rosenthal, Pedagogues and Power: Teacher Organization in Five Large Cities; Seymour Sacks and David Ranney, The Allocation of Fiscal Resources to Large City Education Systems; Frank Munger, The Education of Minorities: Race, Religion and the Large City School; William Wayson, Curriculum Development for Large City Education Systems; Philip Meranto, The Politics of Federal Aid to Education in 1965: A Study in Political Innovation; Alan K. Campbell (ed.), The Government of Education: School Boards, Mayors, Governors and State Legislatures; Alan K. Campbell (ed.), Ideology, Politics and Education Policy: Essays About Decision-Making in Public Education; Alan K. Campbell, Policies and Policy-Making in Large City Education Systems.

Agency: Syracuse University, Maxwell Graduate School, Metropolitan Studies Program, under sponsorship of Carnegie Corporation.

Previous Digest Report: 12:2-120.

Research Problem. An analysis of policy areas as they relate to the education systems of Atlanta, Boston, Chicago, New York, and San Francisco. The areas of study are: (1) allocation of fiscal resources; (2) analysis of minority-group assimilation; (3) administrator-teacher relations; (4) cost and performance; (5) curriculum development. (AKC)

154. EFFECTS OF REAPPORTIONMENT IN NEW YORK STATE

Main Investigator: Alan K. Campbell.

Status of Research and Publications: In process.

Agency: Syracuse University, Maxwell Graduate School, Metropolitan Studies Program, under sponsorship of National Municipal League.

Previous Digest Report: None.

Research Problem. Study the effects of reapportionment on political representation and party behavior, internal legislative organization and procedures, and "policy outputs." (AKC)

155. IMPACT OF PROPERTY TAX ON THE PATTERN OF GROWTH WITHIN URBAN AREAS

Main Investigator: William J. Beeman.

Status of Research and Publications: Field work and statistical analysis in process. To be submitted as doctoral dissertation.

Agency: Syracuse University, Maxwell Graduate School, Metropolitan Studies Program, under sponsorship of J. C. Nichols Foundation of the Urban Land Institute.

Previous Digest Report: None.

Research Problem. Study differential property tax burdens within urban areas to determine whether these differential burdens affect the location of residential, commercial, and industrial property.

Method of Study. Analyze the relationship between property tax rates in each taxing jurisdiction and changes in the tax base attributable to new construction. Interview individuals involved in the development of residential, commercial, and industrial property in the Syracuse and Rochester areas. (AKC)

156. FAMILY STRUCTURE AND PUBLIC HOUSING IN PUERTO RICO

Main Investigator: Helen Icken Safa.

Status of Research and Publications: Completed. Findings published in "The Female-Based Household in Public Housing: A Case Study in Puerto Rico," Human Organization, Vol. 24, No. 2, Summer, 1965. Reprints available at no charge upon request from the Youth Development Center, 926 S. Crouse Ave., Syracuse 1, New York 13210.

Agency: Syracuse University, Youth Development Center, under sponsorship of U. S. Public Health Service.

Previous Digest Report: 12:2-122.

Research Problem. To determine why a high percentage of female-based households exist in public housing, particularly in Puerto Rico.

Previous Relevant Research. Several studies conducted in Puerto Rico point to a concentration of female-based households in public housing. Kurt Back, in his comparative study of slum dwellers, project tenants, and movers from slums and projects, found the highest percentage of broken families among project tenants. Chester Hartman, in a study of family turnover in twelve public housing projects in Puerto Rico, also found that incomplete families tend to become part of a permanent public housing population. A previous study conducted by the investigator revealed that in a sample of 100 households, each drawn from a representative shanty town or public housing project in the San Juan Metropolitan Area, 35 per cent of the project families were female-based compared to 21 per cent of the shanty town families.

Hypothesis. Public housing attracts and holds a high percentage of female-based households and also creates conditions favorable to their development because in many ways public housing lessens the woman's dependence on her husband.

Method of Study. Three chief sources of data were utilized: (1) a sample of 355 applicants for public housing, taken from the shanty town studied in 1960 and representing families in various stages of the selection process; (2) an analysis of the public housing records of 92 of the 100 project families interviewed in 1960 to determine whether female-based households had entered public housing without a stable male partner or whether there had been changes in the head of the household during the family's stay in the project; and (3) a sample of 91 move-outs from the housing project studied in 1960 to obtain some measure of the turnover rate of male- and female-based households in public housing.

Major Findings. Differential selection and turnover rates undoubtedly help to explain the high percentage of female-based households in public housing. It is impossible on the basis of the limited data analyzed here to determine whether public housing also encourages the formation of female-based households. However, the study suggests that the type of families recruited for public housing may be more subject to breaking up because of a history of marital instability and low socio-economic status. (HIS)

157. EFFECTS OF POLLUTION ON WATER USES

Main Investigator: Milo A. Churchill.

Status of Research and Publications: In process.

Agency: Tennessee Valley Authority.

Previous Digest Report: None.

Research Problem. Investigate and compare the relative survival and/or multiplication rates of fecal and non-fecal coliforms in natural waters; the survival and multiplication of fecal coliforms in waste-disposal lagoons, streams, and reservoirs. Compare the oxygen-absorption rates of clean streams with those polluted by various kinds of industrial wastes. Estimates of assimilative capacity of streams at and below promising industrial sites can then be made using the stream reaeration prediction equation recently developed. (JS)

158. BEECH RIVER WATERSHED PROJECT

Main Investigator: Not reported.

Status of Research and Publications: A continuing project begun in 1953

Agency: Tennessee Valley Authority, in cooperation with the Beech River Watershed Association and the State of Tennessee.

Previous Digest Report: None.

Research Problem. This is a demonstration of intensified development of land-water resources integrated with development of other resources of the area comprising 193,200 acres in Henderson and Decatur Counties in the western part of Tennessee. Hydrologic research began in 1953 to measure effects on the hydrology of the Beech River watershed and its subdivisions resulting from changes in land-cover and land-use management. This includes observations of precipitation, streamflow, surface and ground water, and sediment. The agricultural phase of the project is concerned with improvement of land use in sound farming systems. The forestry phase is concerned with expansion and intensification of forestry programs to increase both the resource base and the level of land resource utilization.

In December, 1965, construction was completed of a multipurpose water control system for Beech River watershed consisting of eight reservoirs and 80 miles of stream channel improvement. Research will be conducted on the hydraulic performance of the system to evaluate flood reduction, sediment transport and deposition, and channel degradation and aggradation. (JS)

159. ACCULTURATION IN A MODERN COMPLEX SOCIETY

Main Investigators: J. B. Cornell and R. J. Smith.

Status of Research and Publications: In process.

Agency: University of Texas, under sponsorship of National Science Foundation.

Previous Digest Report: None.

Research Problem. To investigate processes, mechanisms, and effects of acculturative accommodation of Japanese immigrants to the Brazilian socio-cultural milieu

Method of Study. Field research will be conducted in southern Brazil, primarily the State of Sao Paulo, and consist of a rural community sample and an urban resident sample. Within each, family samples will be selected for intensive study for each locale, according to criteria reflective of demographic features and post-entry experience for the entire ethnic population of the region. Research locales will be chosen to represent the range and variation of geographic and economic conditions of Japanese settlement. Cultural change in Japan from 1908 to the present as reflected by the Japanese immigrants during this period must also be considered. Principal steps in the study are: (1) Prepare a general description of acculturative contact in terms of type situations. (2) Define patterns and mechanisms of cultural disintegration, accommodation, and reaffirmation over the posited period and geographical range. (3) Develop certain generalizations concerning the structural position of the Japanese community in Brazilian society. (4) Define articulative institutions and roles in Brazil. (5) Determine what kinds of contact types have been more conducive to assimilation, which to "reorientation" or "reaffirmation." (6) Refine theoretical frameworks for comparative study of acculturation. (JBC)

160. NEW DIRECTIONS OF CITY PLANNING

Main Investigator: John W. Dyckman

Status of Research and Publications: In process. Completion and publication of findings scheduled for 1968.

Agency: The Twentieth Century Fund.

Previous Digest Report: None.

Research Problem. Examine the political and administrative ties between the city and the federal government, and the role of planner and politician in the actual process of planning urban programs. The impact of bureaucratization on both the methods and goals of planning, and the technical requirements of dealing with ever more complex environments, will constitute a major portion of the study. With city planning receiving major attention from the federal government, the interplay between national policy and local planning should lead to new concepts in economic and social planning for urban areas. (LF)

161. THE ROVING LEADER PROJECT

Main Investigator: Alair Ane Townsend.

Status of Research and Publications: Completed but no publication anticipated.

Agency: United Planning Organization (Washington, D. C.), Research Division.

Previous Digest Report: None.

Research Problem. To ascertain the extent to which the program goals of the Roving Leader Program of the District of Columbia Department of Recreation are achieved. The seven Roving Leaders and one supervisor are "detached" group workers who also function in the Cardozo Target Area as a liaison between the youth and established agencies, other adult groups, the business community, and others. They attempt to control hostile behavior, reduce juvenile delinquency, return drop-outs to school, and aid youths in finding employment.

Previous Relevant Research. Walter B. Miller, "The Impact of a Community Group Work Program on Delinquent Corner Groups," The Social Service Review, Volume 31, December, 1957. Walter B. Miller, "The Impact of a 'Total-Community' Delinquency Control Project," Social Problems, Volume 10, No. 2, Fall, 1962. Malcolm W. Klein, A Structural Approach to Gang Intervention: The Lincoln Heights Project, Youth Studies Center 2, University of Southern California, March, 1966.

Method of Study. The Leaders supplied the data which included information on: (1) contact with adults by the Leaders on behalf of the youths; (2) Roving Leader caseloads; (3) total number of youths contacted and engaged in activities; (4) characteristics of 'client' youth; (5) case studies.

Major Findings. The Leaders made a total of 684 supportive contacts during June and July of 1966. These were contacts--primarily with adults--designed to solve particular problems of youth, develop resources for them, or disseminate information on the Roving Leader program. The monthly averages of the six Leaders were: (1) average caseload of youths, all types, 241; (2) average caseload of groups, all types, 7; (3) average number of participants in activities, 909. A total of 10,897 youths (many involved in repeated contacts) were contacted or engaged in Roving Leader organized or sponsored activities during the two month period. Information supplied by the Leaders on 175 clients showed that nearly half of those over sixteen years of age were school drop-outs, only eleven were known to be employed. Other information revealed that 45 (over 25 per cent) had police records and 44 had been given "379" (non-arrest) warnings. The data demonstrate that the Roving Leaders are making

a substantial number of contacts with and on behalf of youths in Washington. Problems known to the Leaders indicate that the Leaders are working with fairly hard core, problem youths. Finally, the number and type of activities and of supportive contacts indicate the wide range and extent of activities required of the Roving Leaders to meet the problems and recreation needs of these youths. (REW)

162. SPECIAL SERVICES FOR MISDEMEANANT YOUTHFUL OFFENDERS

Main Investigators: Edward M. Brooks, Robert Janney, Russell Perry, and Gordon Peters.

Status of Research and Publications: In process.

Agency: United Planning Organization (Washington, D. C.), Manpower Division, under sponsorship of the District of Columbia Department of Corrections

Previous Digest Report: None.

Research Problem. The SSMYO program is designed to provide misdemeanant offenders at the Occoquan Workhouse who are between the ages of 18 and 29 with remedial education, vocational counseling, and practical work experience. The primary mission of the research component of SSMYO is to evaluate the success of the overall program and its two major elements (institutional treatment and post-release job placement) in promoting gainful employment and reducing recidivism. The research design evaluates: (1) the impact of the overall program on post-release employment and recidivism; (2) the relative impact of institutional treatment and job placement on post-release employment and recidivism; (3) the differential impact of the program on different types of trainees; (4) the differences among inmates received in the Workhouse, between the ages of 18 and 29, who (a) reject the program, (b) are rejected by the program, and (c) enter the program.

Method of Study. Each week a research team reviews the file of every new inmate in the Workhouse between 18 and 29. As soon as the eligible ones have been selected from this group by the program administrators, but before they are assigned to experimental and control groups, each is interviewed by two members of the research staff. Information obtained from the files and initial interviews are the source of the standard demographic data used in the research effort, and includes background information regarding education, employment, and prior criminal involvement. I.Q. and Wide Range Achievement scores are recorded and coded upon completion of testing during the first week of the program. Interviews are held in the community at the end of the first, fourth, and twenty-sixth weeks after release from Occoquan to ascertain their employment status. Arrangements have been made with the Superintendent of the D. C. Jail and the F.B.I. to obtain data reflecting recidivism.

Major Findings. Pre-commitment education tended to be inversely related to employment level for men with extensive criminal records. Those with good education were marginally employed, while those with poor education

were employed well. Also, age was related to employment level. Two-thirds of those under age 22 were marginally employed compared to only one-third of those aged 22 and over. Previous educational attainments were irrelevant for the younger group, but for the older men lower education was associated with high employment.

Almost 30 per cent of the releases had not found a job after four weeks in the community. Of the 55 per cent known to have started work, one-third found a job within a week. The median elapsed time from release to employment was six days for all who had found work. Only two men, or five per cent, reported that they had obtained jobs through UPO while 46 per cent found employment themselves or through friends, relatives, or former employers. (REW)

163. NEIGHBORHOOD WORKER PROGRAM

Main Investigators: James R. Curran and Roberta M. Goldstone.

Status of Research and Publications: Completed. Report available from U. S. Department of Health, Education, and Welfare.

Agency: United Planning Organization (Washington, D. C.), under sponsorship of Office of Economic Opportunity and U. S. Department of Health, Education, and Welfare.

Research Problem. One of the most unique and most promising attempts of the War on Poverty is the utilization of community residents as agents of community organization and program implementation. In the District of Columbia, these agents are called Neighborhood Workers and are paid employees of the United Planning Organization. The Workers operate directly from the fourteen Neighborhood Development Centers strategically located in depressed districts of the Metropolitan Area. It is the Worker's job to reach out into the community and involve individuals in Center and/or program activities

Previous findings by the Research Division document UPO administrators' feelings that the Neighborhood Worker should: (1) be a public relations agent for UPO; (2) provide clients with direct emergency assistance; (3) contact and refer potential clients to the various UPO programs; (4) inform community about UPO programs and services; (5) seek out unrest and inequities and attempt to mobilize the community around these issues; (6) aid program development by locating problem areas in the community and making it possible to observe them; (7) extend personal counseling services; (8) be an official critic of UPO and UPO programs; (9) aid in developing, organizing, and maintaining neighborhood (block) clubs.

Realistically, no worker can perform all these activities. This research seeks to document the actual performance of these workers. The performance varies in number, kind, and efficacy.

Method of Study. Data were gathered through interviews with 132 out of 170 Neighborhood Workers and 25 of about 30 supervisors. Methods included questionnaires administered to Neighborhood Workers and their

supervisors, Neighborhood Worker Application Forms, tape recording of orientation session, supplementary discussions with supervisors, and Research Division monthly statistical reports

Major Findings The completed report contains seven sections. Some of the major findings reported were: (1) There is a disparity between supervisors of different ranks as to what characteristics the ideal Neighborhood Worker should possess. (2) Increased specialization documents of Neighborhood Workers is a major developmental characteristic of bureaucracy in UPO. (3) Expectations of Neighborhood Workers as to their role tasks were mutually compatible with those of their supervisors in what might be termed community mobilization activities (contacting and organizing poverty populations), but not compatible in what might be termed casework activities (direct services, counseling, or as a critic of UPO). (4) There seems to be a positive relationship between Neighborhood Worker feelings of effectiveness in program areas and the scope, intensity, and autonomy allowed the worker in that area. (5) The majority of block clubs, organized by Workers, are involved mainly in short range activities in neighborhood improvement, recreation, and community organization. At least on the block club level, mobilizing poverty populations to fight for institutional change is not realized. (6) While the majority of Neighborhood Workers are not involved in directly criticizing or protesting against agencies, organizations, or institutions, nor encouraging others to do so, those who are involved apparently see their role as encouraging leadership and involvement rather than becoming directly involved themselves. (REW)

164. INTERGOVERNMENTAL RELATIONS IN NEW TOWNS

Main Investigator: Page L. Ingraham

Status of Research and Publications: Preliminary research in process.

Agency: Advisory Commission on Intergovernmental Relations.

Previous Digest Report: None.

Research Problem. Examine the potential of "new towns" as one method of meeting the problem of increasing urbanization and concentration of population in metropolitan areas

Method of Study. (1) Review the problems involved in planning, regulating, and building large new communities, with emphasis on the role of federal, state, and local governments and the relationships between the public and private sectors. (2) Consider questions of land assembly and development, planning and development, provision of community facilities and services, and the timing and character of municipal government. (3) Explore relationships between new towns, metropolitan areas, and regions, and the governmental and administrative techniques needed to regulate development in accord with public objectives. (AJR)

165. INTERGOVERNMENTAL RELATIONS IN THE POVERTY PROGRAM

Main Investigators: Albert J. Richter and Robert A. Aleshire.

Status of Research and Publications: Completed and published August, 1966.

Agency: Advisory Commission on Intergovernmental Relations.

Previous Digest Report: 12:2-126.

Research Problem. Examination of the intergovernmental aspects of the Economic Opportunity Act of 1964 as amended. Focus was on determining whether the Office of Economic Opportunity and its nine component programs is maximizing the unique potential of each of the three levels of government in pursuit of the Act's national objective of eliminating poverty. The study also sought to appraise the effect of the anti-poverty effort on the strength of the states and local governments as partners in the federal system.

Method of Study. The report is based on data and comments obtained from a wide variety of sources, including officials of OEO, federal agencies administering delegate programs, state and local officials, and others involved in the history and operations of the Economic Opportunity Act. A major source of data and opinions was a series of four mail questionnaires prepared in cooperation with and sent out by three national organizations to key state, local, and community action agency officials involved in the anti-poverty program. A National Association of Counties questionnaire was sent to the chief elected county official in all counties in which a community action program grant had been approved. A National League of Cities questionnaire went to the mayors of all cities of 50,000 population or less with an approved CAP grant. The National Association for Community Development sent one questionnaire to the directors of state offices of economic opportunity, and a separate one to the executive directors of community action agencies which had received CAP grants.

Major Findings. (1) While the Act authorizes community action programs to be developed and conducted by either public or private non-profit agencies, or a combination of both, there is a distinct tendency to set up private agencies which now represent 75 per cent of all CAAs. (2) Lack of a requirement that CAAs establish a framework for making program decisions based on a balancing of anti-poverty needs and resources has also weakened CAAs as coordinators, and made more difficult OEO's task of achieving maximum effect with anti-poverty resources. (3) The Community Action Program adds one more layer to the growing number of federally aided programs and agencies at the local and regional level concerned with physical and human resource planning and development. (4) A distinct lag is evident in meeting the statutory objectives of making the benefits of the Act available to the poor, regardless of where they live. (5) The unique contributions and strengths of the states are not being fully utilized.

On the basis of these and other findings, the Advisory Commission made 14 recommendations, including: (1) General units of local government rather than private nonprofit groups should organize community action agencies (CAAs), except that where such governments do not prefer or otherwise have refrained from undertaking anti-poverty programs, the private groups or a combination of public and private representatives should organize the CAAs. All other things equal, OEO and states should give preference to establishment of CAAs by units of local general government rather than private groups. (2) Congress should make no change in the requirement for "maximum feasible participation" of the poor in the community action program (CAP). (3) OEO should require CAAs to initiate comprehensive plans to guide anti-poverty programs. (4) OEO should encourage separate CAAs in metropolitan areas to conduct community action planning and appropriate services on a joint basis for increased effectiveness and economy. (5) States should authorize and provide financial incentives for establishment of multi-purpose regional agencies to undertake community action and other planning and development programs over multi-county areas; and where states have taken such action, federal agency heads administering planning and development programs should require grant recipients to use the geographic base of such state-established units and otherwise make the maximum feasible use of their facilities and resources. (6) The Economic Opportunity Council should establish machinery to assure integrated planning at the state and federal levels of job creation and job training programs. (AJR)

166. FISCAL IMBALANCE IN THE FEDERAL SYSTEM

Main Investigator: Not reported.

Status of Research and Publications: In process. Publication scheduled for 1967.

Agency: Advisory Commission on Intergovernmental Relations, Taxation and Finance Section.

Previous Digest Report: None.

Research Problem. To develop alternative approaches, consistent with the philosophical values of the federal system, for financing the expanding and changing requirements of state and local governments in the years ahead.

Hypothesis. Because the lead time is long between the development of legislative proposals for modifying intergovernmental fiscal arrangements and their active consideration by political leadership and especially their implementation, there is an urgent need to think and plan ahead to minimize the possibility of a grave fiscal imbalance developing which would threaten the philosophical values of our federal system.

Method of Study. Research is scheduled to include: (1) an assessment of the magnitude and nature of state and local fiscal problems; (2) the allocation of tax sources among governmental levels; (3) federal-state, interstate, and state-local tax relationships; (4) federal-state, federal-local, and state-local intergovernmental transfers; and (5) metropolitan area fiscal problems. Policy issues to be covered include: (1) adjustments in the division of tax sources; (2) the role of federal financial aids to states and localities; (3) state financial aids to local governments; (4) metropolitan area finances; (5) adjustments in local government structure to accommodate fiscal reform; and (6) intergovernmental relations in borrowing operations. (AJR)

167. GROWTH PATTERNS IN EMPLOYMENT BY COUNTY, 1940-1950 AND 1950-1960

Main Investigator: Lowell D. Ashby.

Status of Research and Publications: Published in eight volumes and available from the Superintendent of Documents, U. S. Government Printing Office, Washington, D. C. 20402, or from any Field Office of the U. S. Department of Commerce. Volume 1, New England, \$.45; Volume 2, Mideast, \$.65; Volume 3, Great Lakes, \$1.50; Volume 4, Plains, \$1.75; Volume 5, Southeast, \$2.75; Volume 6, Southwest, \$1.50; Volume 7, Rocky Mountain, \$.75; Volume 8, Far West, \$.60.

Agency: U. S. Department of Commerce, Office of Business Economics, Division of Regional Economics.

Previous Digest Reports: 12:1, p. 107; 12:2-128.

Research Problem. Survey of employment and changes in employment for the counties and states of the eight major regions of the United States. The change in employment for each county is shown with the amount by which it exceeds or falls short of the national average separated into industrial mix and regional share components. The influence of each of 32 industries on these employment changes is statistically detailed. (JWM)

168. HYDROLOGIC EFFECTS OF URBANIZATION

Main Investigator: J. R. Crippen

Status of Research and Publications: Final report in preparation.

Agency: U. S. Department of the Interior, Geological Survey, Water Resources Division (Menlo Park, California)

Previous Digest Report: None.

Research Problem. To determine the effects of changes in land use associated with suburban, industrial, and urban development on hydrologic characteristics such as runoff, flood frequency, recharge, channel stability, water quality, sediment yield, and the interrelationship between surface and ground water. Problems in storm drainage design will also be considered. (JRC)

169. QUANTITATIVE WATER-BUDGET ANALYSIS OF WESTERN LONG ISLAND

Main Investigators: O. L. Frank and G. E. Seaburn.

Status of Research and Publications: In process.

Agency: U. S. Department of the Interior, Geological Survey, Water Resources Division (Mineola, Long Island, New York), in cooperation with Nassau and Suffolk counties of New York.

Previous Digest Report: None.

Research Problem. To review the continuity principle (hydrologic-budget concept) as it applies to the entire hydrologic system and the ground-water subsystem of western Long Island.

Method of Study. Study will be based on a hydrologic budget estimated for predevelopment (natural) conditions, and on hydrologic budgets for the entire project area and subareas, based on the degree of development (or overdevelopment) for selected subsequent time intervals. These budgets will demonstrate quantitatively the impact of man's activities on the hydrologic regimen and how those activities have affected the perennial yield of the system. The relation of the continuity principle to virtually all quantitative management decisions will be sought by means of specific evaluations of the hydrologic effects of proposed alternative methods of development, especially those proposed for managing the ground-water resources of Nassau County. (OLF)

170. INFLUENCE OF INDUSTRIAL AND MUNICIPAL WASTES ON ESTUARINE AND OFFSHORE WATER QUALITY

Main Investigator: J. F. Santos.

Status of Research and Publications: A continuing project begun in 1963.

Agency: United States Department of the Interior, Geological Survey, Water Resources Division (Tacoma, Washington).

Previous Digest Report: None.

Research Problem. Examine the influence of industrial and municipal waste disposal on all phases of water quality: chemical, physical, ecological and sanitary in fresh, brackish, and saline environments.

Method of Study. The correlations are based on measurements made with multiple parameter water quality recorders at four sites on the Duramish River estuary. Parameters recorded include dissolved oxygen, specific conductance, water temperature, pH, turbidity and solar radiation index. Computer programs will be written to analyze these data. (JFS)

171. EFFECT OF PROPERTY TAXES ON METROPOLITAN AREAS

Main Investigator: Jerome P. Pickard.

Status of Research and Publications: Completed. Published by the investigator as Taxation and Land Use in Metropolitan and Urban America (Research Monograph 12). Copies may be obtained from Urban Land Institute, 1200 - 18th Street, N. W., Washington, D. C. 20036.

Agency: Urban Land Institute.

Previous Digest Report: None.

Research Problem. Examine metropolitan area property taxation to determine its effects, through the real estate market, on land uses. Local communities are classified into five types: central city, middle-aged suburb, new rapid-growth suburb, industrial enclave, and estate enclave.

Major Findings. (1) Local government costs have increased over the past decade at a much faster rate than national income and product. The highest property tax region in the U. S. is the Northeast. In general, the South is characterized by relatively low effective rates. (2) Planning goals and taxation policies need to be coordinated by local governments. Too many have followed the "primrose path" of fiscal zoning. Not every community needs to have a balance of land uses to enjoy fiscal health; the quality and condition of property is more significant than the particular types of land use. (3) The degree to which the property tax in our larger cities is a problem and reaches relatively high levels is directly related to the degree of local dependence on it. Cities with low property tax rates have broader bases of revenue and depend on the property tax only one-third to one-half as much as do high-tax cities. In many instances, present city property tax policies place a premium on neglect and discourage owners from renewal, rehabilitation, or adequate maintenance of property. (4) Where urban growth is greatest and market values are rising, the impact of property taxation is least; where urban growth is least and market values stagnant, the impact is greatest. In many commercial properties, property taxes are the largest single item of expense. Typically, they account for about 15 per cent of gross income from office buildings and apartments, and 10 to 18 per cent of gross income of shopping centers. In high-tax areas these percentages range from 20 to 35 per cent. Federal taxes vary principally according to the income characteristics of the taxpayer; but local taxes vary according to the characteristics of the property or of the items taxed. (5) Property taxes tend to be heaviest in central city and older core areas and

lightest in well-to-do suburbs or industrial enclaves. In large and extensive cities, public services operate well in the most needy neighborhoods. In areas where the political and fiscal bases are fragmented, needs and resources often are not equalized. Thus, tax burdens may vary greatly between wealthy and poor areas. Counties are better taxing and service units within metropolitan areas than small municipalities. Many local fiscal problems could be eased by establishing wider tax bases.

Where serious property tax problems exist, local communities face a limited number of choices: (1) The base of the property tax may be changed. (2) Other forms of taxes may be levied. Broad-based taxes levied over an extensive geographical area, which provide revenue to local jurisdictions, appear to be preferred. (3) Various functions may be financed by specific service charges. (JPP)

172. THE INTERRELATIONSHIP OF VARIABLES AMONG JUVENILE DELINQUENTS

Main Investigators: Harold C. Nielson and Richard C. Sowles.

Status of Research and Publications: Completed.

Agency: Veterans Administration Hospital (Sepulveda, California), in cooperation with University of California (Los Angeles) and the University of Utah, under sponsorship of U. S. Veterans Administration.

Previous Digest Report: None.

Research Problem. Examine the interrelationship among a large number of variables for a group of institutionalized, delinquent adolescents.

Method of Study. Biographical, experiential, and psychological data were gathered from a sample of 408 male and female students at the Utah State Industrial School. The data were analyzed by means of a factor analysis which provided a principal component solution with verimax rotation. Eight analyses were conducted, four each for the boys and the girls, utilizing different combinations of the seventy items selected. The first two analyses included all seventy variables. The next two analyses excluded all variables except background and experiential variables. The third set of analyses included personality trait ratings, offenses and I.Q. The fourth set involved only personality ratings and I.Q. Results were organized into eight correlation matrices with the factor loadings inserted into the primary diagonal of each matrix.

Major Findings. (1) More comprehensive understanding is accomplished when interrelationships among quite different types of traits is undertaken rather than restricting analysis to a unitary dimension of traits such as "Behavioral Symptoms," or "Test Scores." Thus, different aspects of the subject's background were related to different sets of personality traits and/or

experiential events. (2) Sex differences were present. Analysis of data for the boys resulted in six main factors identified as anti-social, disturbed, social instability and deprivation, delinquent experience, ethnic-cultural background, and offenses. The six main factors for the girls were identified as personal impoverishment, internalized rejection, anti-social self-indulgence, offenses, ethnic-cultural background, and rejection and loss. (3) No relationship was found between any personality trait or configuration and offense variables. However, certain types of external circumstances appear related to broad types of offense behavior, those of theft or ungovernability. (4) Personality configuration did not appear related to diagnostic categories when arranged in a quasi-linear manner from normal to severe impairment. (5) Environmental characteristics appear to merit at least equal, if not more, attention than personality variables. (HCN)

173. WATER AND SEWER SUPPLY DECISIONS: A CASE STUDY

Main Investigator: Francis Tannian.

Status of Research and Publications: Completed and submitted as doctoral dissertation, University of Virginia, Department of Political Economy, June, 1965.

Agency: University of Virginia, Graduate School of Arts and Sciences.

Previous Digest Report: None.

Research Problem. Make an economic analysis of the decision-making processes of a large water supply institution, the Washington Suburban Sanitary Commission. Along with other services such as flood control, storm drainage, and recreation, the Commission produces, allocates, collects, and treats water in a rapidly growing suburban metropolitan area. To finance these operations and expand still further, the Commission spends (1965-66 figures) over one million dollars a week. Not only are the absolute dollar amounts in themselves significant, but Commission decisions to invest in, operate, and price their services have important implications for land values, land use, and the efficient operation and development of other private and public goods and services in the metropolitan area.

Major Findings. Because the Commission has a very complex pricing scheme for its several product lines, misleading "low rate" publicity, infrequent billing, and because charges for some services appear on county tax bills rather than Commission bills, customers probably do not understand Commission pricing and cannot relate particular charges to benefits received.

Analysis of pricing related to supply costs, points to other inefficiencies. Water supply costs vary among communities due to greater distance and altitude which can require pumping. Because the Commission has

rejected marginal cost for average cost pricing, some communities enjoy benefits of above average cost water supply, but pay average cost prices. Moreover, large lot suburban customers impose higher peak plant costs on the water system because excess capacity had to be installed but is used only in the summer months. Since the water user rate is the same to these customers as all others, they receive higher cost service at the expense of other customers.

Farm land receives special pricing treatment. Because the Commission sets a lower base for the ad valorem tax charge and lower front foot benefit rates on farm land, land development interests receive special treatment. "Farm land" can be held by speculators at lower costs. The Commission does not provide the public with information concerning investment decisions or alternatives. Interest costs are rarely stated in announcements of project costs. A wholly arbitrary price for service to new areas called a "contribution" has been increasingly but inconsistently used. Through the contribution and other prices, the Commission cultivates real estate developers' needs with subsidized, lower than marginal cost prices for new sewer and water lines. This tends to promote sprawl and land use inefficiencies. The Sanitary Commission is an organ of the Maryland legislature and legally insulated from the public. Competition is legally blocked. The result seems to be imbalance in the supply of public goods locally, waste of water, and inefficient suburban development. (FT)

174. VIRGINIA COUNTIES AND MUNICIPALITIES CHRONOLOGY OF CREATION AND INCORPORATION

Main Investigator: J. Devereux Weeks.

Status of Research and Publications: Completion and publication of findings scheduled for 1967.

Agency: University of Virginia, Institute of Government.

Previous Digest Report: None.

Research Problem. (1) Present, in chronological order, the years in which Virginia counties were established, and the years in which the State's municipalities were incorporated. (2) Analyze trends in the historical pattern of county and municipal creation. (3) Provide the names of the counties and shires from which each county and city was formed as well as the name of the county in which every incorporated town is located. (JS)

175. SPECIAL DISTRICT GOVERNMENT IN VIRGINIA

Main Investigator: S. J. Makielski, Jr.

Status of Research and Publications: In process. Completion expected in 1967.

Agency: University of Virginia, Institute of Government.

Previous Digest Report: None.

Research Problem. Examine the growth of special districts and public authorities in the State of Virginia, with major emphasis on the effects of special districts on Virginia's state and local governments. The problem is important in relation to questions of metropolitan growth in the state and the rapid industrialization and urbanization that is taking place. The use of special districts is apparently one response to urbanization, but is also a means of encouraging urbanization and industrial development.

Method of Study. The study will test the major hypotheses offered by Bollens, Special District Governments in the United States (1957), and Robert G. Smith, Public Authorities, Special Districts and Local Government (1964), who suggest: (1) special district government structurally modifies other governmental forms and activities; (2) special district government is less responsive and responsible than other forms of government; (3) special district government generates long-term problems in the effort to resolve short-term problems. (JS)

176. PUBLIC ASSISTANCE AND CHILD WELFARE PROGRAMS AND THEIR CONTROL IN VIRGINIA

Main Investigator: Joseph Cepuran.

Status of Research and Publications: In process.

Agency: University of Virginia, Institute of Government.

Previous Digest Report: None.

Research Problem. Study the roles of federal, state, and local governments in providing public assistance and child welfare services.

Method of Study. Emphasis is placed on local welfare departments. Interviews of city and county welfare boards and departments were conducted to determine how each locality does, in fact, administer these programs. The historical development, statistical development, and administrative provisions of these programs are described. (JC)

177. CRIMINAL LAW ENFORCEMENT IN VIRGINIA

Main Investigator: J. Devereux Weeks.

Status of Research and Publications: In process. Study to be completed and results published June 30, 1967.

Agency: University of Virginia, Institute of Government

Previous Digest Report: None.

Research Problem. Conduct a state-wide study of the interrelationships existing in Virginia between local, state, and federal agencies engaged in criminal law enforcement. The study will reveal the ways in which these agencies assist one another in their day-to-day law enforcement activities and training programs. It will also attempt to project future developments in law enforcement in Virginia. (JDW)

178. IMPACT OF SLUM OWNER RELOCATION ON SLUM FORMATION

Main Investigator: Daniel R. Mandelker.

Status of Research and Publications: Report completed and published but supply exhausted. Xerox copies available from School of Law, Washington University, St. Louis, Missouri 63130. \$3.00 per copy.

Agency: Washington University (St. Louis), School of Law.

Previous Digest Report: 12:2-137.

Research Problem. To study and analyze the impact of slum owner relocation on slum formation.

Major Findings. The study provided partial confirmation of the hypothesis that there is an identifiable class of slum entrepreneurs, who knowingly invest and reinvest in residential property in deteriorated and declining areas. The study investigated the subsequent investment patterns of owners of residential property in a St. Louis urban renewal project area. Three groups of owners were identified. One group did not reinvest in residential property, another did some reinvesting but tended to leave the real estate market, and a third group substantially increased its residential holdings. The third group, consisting almost entirely of large real estate companies, appears to contain a significantly important group of slum entrepreneurs. As these entrepreneurs tend to reinvest in slum properties, a strong case can be made for their more intensive regulation both at state and local levels. (DRM)

179. EFFECT OF COMPREHENSIVE PLANNING ON URBAN RENEWAL PROJECT EXECUTION

Main Investigators: Daniel Mandelker and Roger Montgomery.

Status of Research and Publications: Completion expected late 1966.

Agency: Washington University (St. Louis), Urban Renewal Design Center, under sponsorship of Albert E. Meyer Foundation.

Previous Digest Report: None.

Research Problem. A case analysis of urban renewal project experience in Little Rock, Louisville, Memphis, Nashville, and St. Louis, to determine how required comprehensive planning has affected urban renewal project results (RM)

180. EVALUATION OF THE PRESIDENT'S APPALACHIAN COMMISSION

Main Investigator: Gordon T. Saddler.

Status of Research and Publications: In process.

Agency: West Virginia University, Bureau for Government Research.

Previous Digest Report: None.

Research Problem. To examine selected aspects of institutions and processes of the President's Appalachian Commission with respect to natural and human resource development.

Method of Study. (1) As an institution, the Commission is explored as a significant initiator of change in traditional federal-state relations to meet current demands and needs of resource development in the Appalachian region. It is conceived by the investigator as a concept of regional federalism, for it contemplates legality within existing federal structure predicated upon constitutional obligations of the national and state governments to deal with socio-economic problems which affect both the nation and regions. (2) The new institutional arrangement is treated as a pattern to deal with shifting socio-economic activity characteristic since World War II. The problems of the economy and the failure of existing institutions (states acting separately) to achieve the goal of full employment are explored as factors which necessitated the regional arrangement.

In its examination, the study asks these questions: (1) What is the concept of regional federalism which the Commission contemplates? (2) Are there viable indices of relationship which characterize the Appalachian region? (3) To what extent have traditional institutions, policies, and programs been effective? (4) Is there precedence for a new institutional approach? (5) What are the programs and how are they to be structured and administered? What are the problems? To what extent can people and institutions be altered for full utilization of resource development? (6) To what extent does the regional structure provide adjustment and accommodation of existing institutions and processes? (7) Are there significant alternatives? (8) What are the challenges, portents, and responsibilities? (GTS)

181. ECOLOGICAL PATTERNS IN AMERICAN CITIES

Main Investigator: L. F. Schnore.

Status of Research and Publications: In process.

Agency: University of Wisconsin, Department of Sociology, under sponsorship of National Science Foundation.

Previous Digest Report: None.

Research Problem. Investigate the growth and development of cities in the United States, emphasizing changes in spatial structure over time.

Method of Study. (1) Conduct a series of gross statistical studies, based largely on census materials, of some 200 American cities from 1790 to 1970. (2) Conduct a series of more refined historical case studies, based on data from city directories and other historical documents, of 10 or 12 selected American cities. Detailed changes in urban neighborhoods are being investigated, with the prime focus on changes in ethnic, family, and class composition. (LFS)

182. POVERTY AND CRIME IN WISCONSIN

Main Investigator: Arthur P. Miles.

Status of Research and Publications: In process.

Agency: University of Wisconsin, School of Social Work.

Previous Digest Report: None.

Research Problem. Document and analyze the interrelationships between economic deprivation and the commission of crimes in Wisconsin.

Method of Study. A stratified sample of offenders will be studied by use of case records and personal interviews. Data will be secured through the cooperation of the Division of Corrections and the Bureau of Research of the State Department of Public Welfare. (APM)

183. THE ECONOMICS OF AIR POLLUTION CONTROL

Main Investigators: Thomas D. Crocker, M. Mason Gaffney, Veerappan K. Chetty, Paul G. Neimann, and Anthony L. Danis.

Status of Research and Publications: In process.

Agency: University of Wisconsin (Milwaukee), under sponsorship of U. S. Department of Health, Education, and Welfare.

Previous Digest Report: None.

Research Problem. To develop and apply a body of economic welfare criteria for the control of atmospheric pollution which will maximize the economic returns to be derived from the air resource.

Method of Study. The efficacy of each type of institutional control structure will be examined in terms of its applicability to the air pollution problem caused by the manufacture of phosphatic materials from raw rock phosphate in Polk and Hillsborough Counties, Florida. (TDC)

CANADA

184. THE POWER STRUCTURE OF CALGARY

Main Investigator: Harvey Rich.

Status of Research and Publications: In process.

Agency: University of Calgary, under sponsorship of Canadian Council on Urban and Regional Research.

Previous Digest Report: None.

Research Problem. Study the decision-making process in Calgary, one of the fastest growing metropolitan areas in Canada. (AA)

185. LOCATIONS OF BRANCH PLANTS IN CANADA

Main Investigator: Michael Ray.

Status of Research and Publications: In process.

Agency: Carleton University, Departments of Economics and Geography, with support from Canadian Council on Urban and Regional Research.

Previous Digest Report: None.

Research Problem. The study will examine and process data on factory locations in relation to markets, material, and capital sources, with special attention to branch plants of U. S. firms. This is an extension of previous work on industrial location in Canada. (AA)

186. ECONOMICS OF METROPOLITAN GOVERNMENT

Main Investigator: Gail Cook.

Status of Research and Publications: In process.

Agency: Carleton University, Department of Economics, under sponsorship of Canadian Council on Urban and Regional Research.

Previous Digest Report: None.

Research Problem. Identify the economic effects of the first Canadian experiment in metropolitan government, the Corporation of Metropolitan Toronto, created in 1953. (AA)

187. GOVERNMENTAL ORGANIZATION IN A NOVA SCOTIA COUNTY

Main Investigator: Lawrence Sandford.

Status of Research and Publications: In process.

Agency: Dalhousie University, Institute of Public Affairs, under sponsorship of Canadian Council on Urban and Regional Research.

Previous Digest Report: None.

Research Problem. Devise an analytical approach to improving the government of an area such as Pictou County in Nova Scotia. (AA)

188. ADVANTAGES OF INDUSTRIAL PARKS

Main Investigator: Claude Autin.

Status of Research and Publications: In process.

Agency: Laval University, under sponsorship of Canadian Council on Urban and Regional Research, and the Metropolitan Quebec Bureau of Industry and Commerce.

Previous Digest Report: None.

Research Problem. Identify the benefits of industrial park location and the circumstances that favor it.

Method of Study. Use of cost accounting and other methods of data collection. (AA)

189. ILE JESUS, RESIDENTIAL SUBURB OF MONTREAL

Main Investigator: Francoise Ricour.

Status of Research and Publications: A doctoral dissertation in Geography. Completion expected September, 1967.

Agency: University of Montreal, Department of Geography.

Previous Digest Report: 11:2-152.

Research Problem. Past, present, and future development of the suburb, using Ile Jesus, a typical Montreal suburb, as a case study.

Method of Study. The study relies basically upon two sources of information. The Census of Canada, 1961, provided statistics by municipalities for the metropolitan area and statistics by census and enumeration tracts for Ile Jesus. The Municipal Census, 1964 (statistics for the 14 municipalities which then existed) provided data by blocks for about 20% of the total population. (F)

190. MUNICIPAL RE-ORGANIZATION: CONSEQUENCES FOR STAFF

Main Investigator: Jean Maynaud.

Status of Research and Publications: In process.

Agency: University of Montreal, Department of Political Science.

Previous Digest Report: None.

Research Problem. Examine recent consolidations of local authorities--municipal, educational, and other--with special reference to resulting changes in staff structure. (AA)

191. INFORMAL COMMUNICATION IN A LOW-INCOME AREA

Main Investigator: James Lotz and Jean Trudeau.

Status of Research and Publications: In process.

Agency: Saint Paul University, under sponsorship of Canadian Council on Urban and Regional Research.

Previous Digest Report: None.

Research Problem. Within a designated urban renewal area in Ottawa: (1) discover the channels through which information is imparted and needs are articulated, especially by the women of the district; (2) document the social history of the area; and (3) identify mutual help arrangements among the residents. (AA)

192. URBANIZATION AND POLITICAL UPHEAVAL IN WESTERN EUROPE, 1830-1960

Main Investigator: Charles Tilly.

Status of Research and Publications: In process.

Agency: University of Toronto, Department of Sociology, under sponsorship of Canada Council and the Social Science Research Council.

Previous Digest Report: None.

Research Problem. To test and reformulate standard ideas concerning the social consequence of urbanization by examining the relationship (if any) between the pattern of urban growth and changes in the form, frequency, intensity, loci, and participants of political disturbances in Western European countries.

Method of Study. In France, the research rests mainly on the identification and coding, according to uniform criteria, of about 4,000 political disturbances and 50,000 industrial conflicts and their analysis in terms of detailed observation of local and temporal variation in urban and industrial change. In Spain, Germany, Italy, England, and other countries the treatment is more superficial. (CT)

193. UPGRADING SKILLS IN LOW-PAID OCCUPATIONS

Main Investigator: Stewart Crysedale.

Status of Research and Publications: In process.

Agency: University of Toronto, Department of Sociology, under sponsorship of Canadian Council on Urban and Regional Research, and Federal and Provincial Departments of Labour.

Previous Digest Report: None.

Research Problem. Study the factors related to occupational mobility in a specific locality of Metropolitan Toronto. Many low-income workers are not taking advantage of available opportunities to improve their earning power. It is thought this may be particularly true of recent arrivals in the city. (AA)

194. LAND USES ADJACENT TO CANADIAN SEAPORTS

Main Investigator: Charles Forward.

Status of Research and Publications: In process.

Agency: University of Victoria, Department of Geography, under sponsorship of Canadian Council on Urban and Regional Research.

Previous Digest Report: None.

Research Problem. Study the present uses, ownerships, and values of lands bordering five harbors on the Canadian Pacific and Atlantic coasts. (AA)

195. CORRIDORS OF SETTLEMENT AND MUNICIPAL BOUNDARIES

Main Investigator: C. F. J. Whebell.

Status of Research and Publications: In process.

Agency: University of Western Ontario, Department of Geography, under sponsorship of Canadian Council on Urban and Regional Research.

Previous Digest Report: None.

Research Problem. Early urban settlements tended to occur along corridors of penetration which often developed into major routes and may still influence settlement patterns. This study seeks to determine their effects, if any, on areas of municipal jurisdiction. (AA)

196. PLANNING DECISIONS OF THE ONTARIO MUNICIPAL BOARD

Main Investigator: G. M. Adler.

Status of Research and Publications: In process.

Agency: University of Western Ontario, Faculty of Law, under sponsorship of Canadian Council of Urban and Regional Research.

Previous Digest Report: None.

Research Problem. Appointed by the Province, the Ontario Municipal Board holds local hearings and renders decisions on municipal boundaries, official plans, zoning, capital borrowing, and other matters. This study will review and analyze the claims and evidence laid before the Board and the reasoning and effects of its rulings. (AA)

LOW-INCOME HOUSING DEMONSTRATIONS
(Arranged alphabetically by states)

197. DESIGN AND PROVISION OF LOW-COST DWELLINGS FOR MIGRATORY FARM FAMILY WORKERS
DESIRING PERMANENT SETTLEMENT IN URBAN COMMUNITIES

Main Investigator or Director: Walter J. Monasch.

Agency: State of California, Department of Housing and Community Development,
1100 K Street, Sacramento, California.

Research Problem. The development and evaluation of low-cost prototype housing units for families of migratory farm workers, with priority given those desiring permanent settlement in urban communities, and a program of special services to facilitate settlement by such migratory worker families. Special services will include: information and guidance to families in obtaining job-training opportunities, supplementary or improved employment in or near the community, and help in improving housing maintenance and budget practices. Conclusions and recommendations to be submitted to the U. S. Department of Housing and Urban Development in 1968.

198. LOW-COST HOUSING FOR HOT, ARID AREAS

Main Investigator or Director: Henry Sanoff.

Agency: University of California (Berkeley), Department of Architecture,
Berkeley, California. Project completed and report available now.

Research Problem. To demonstrate improved ways of providing low-cost housing for a hot, arid area of the United States, based on environmental comfort and compatability with the sociology of family living patterns.

Method of Study. An extensive analysis was conducted of problems involved in the design of permanent housing for low-income families in a hot, arid region of the United States. A survey was made to establish the sociological structure and living patterns of the families for whom these dwellings are intended. Investigations of self-help potential and effectiveness were evaluated through the assistance of social welfare groups. Further examinations were concerned with limitations of present housing facilities available for this income group. The study included a cross section from the migrant to the permanent base worker. This project was concerned primarily with families in the latter class.

A climatic profile of the Fresno area was developed to determine the magnitude of the variables that will influence the design of the dwelling. A field test was conducted to determine the thermal response of various combinations of construction materials, roof configurations, insulation and shading devices. Simultaneously, a thermal analysis computer program was developed at the University of California (Los Angeles), to utilize identical

climatic inputs. This digital computer program permitted rapid substitution of variables through the use of an analogous electrical network, facilitating many more combinations of the elements provided by the field test. Conclusions were tabulated into a set of quantifiable functional requirements, where related subsets of activities were grouped. From the activity groupings, topological diagrams were drawn which indicate the range of possible design alternatives. The diagrams were then translated into three-dimensional designs which were tested in a wind tunnel simulating the actual wind speeds and evaluated against the set of functional requirements. Surveys were made and analyzed to predict the degree of acceptance. Three groups of people were interviewed: the potential user, investors and loan officers, and architects. After these units are constructed, a series of tests will be conducted to evaluate the user's image of the units, the actual use of spaces compared with their intended use, the subjective comfort level of the occupants, the relation of amenities to income, and the degree to which a previously established list of requirements has been satisfied.

Major Findings. A comparison of results from both climatic experiments indicated that a high degree of similarity exists between them. Further studies produced a series of relationships between orientation and optimum geometry of the dwelling unit as influenced by solar input. Comparisons of solar inputs indicate that the summer heat load is less for two stories than for one. The comparative effect of roof slope upon total radiation inputs, the relation of window openings to internal air movement, and the reaction of materials to solar and thermal radiation were also calculated. Reflectance was found to be the single most effective variable. The prototype dwellings utilized different structural systems, each comparing favorably with the other in terms of economy and performance.

199. HOME OWNERSHIP FOR LOW-INCOME FAMILIES

Main Investigator or Director: Elizabeth Heller.

Agency: San Francisco Development Fund, 126 Post Street, San Francisco 4, California.

Research Problem. The demonstration is to determine whether lower income families with a demonstrable income increase potential can be assisted to successful home ownership by a program combining grants towards down payments, subsequent monthly subsidies for up to four years, and counseling. The project is designed to compare the performance of an experimental group of 60 families whose incomes are within public housing limits with a control group of an equal number.

Originally, the program was to relocate families displaced by a redevelopment project in San Francisco into moderately priced private cooperative housing to be constructed in the same project. As a result of the passage of Proposition 14, the constitutional amendment prohibiting fair housing legislation in California, this new housing was not built. Consequently, the demonstration was re-designed to assist families in the purchase of single-family houses on the private market within 20 miles of San Francisco, with FHA and VA financing.

200. PROVISION OF SPECIALIZED ADVICE AND SERVICES TO DEVELOPERS OF AND INVESTORS IN PRIVATE LOW-INCOME HOUSING

Main Investigator or Director: Paul C. Warnke.

Agency: Citizens for Better Housing, Inc., 701 Union Trust Building, Washington, D. C.

Research Problem. Provision of specialized advice and services to developers of, and investors in, private low-income housing, in connection with land, financing, market analysis, construction cost, and other technical problems. The private nonprofit corporation will provide the services to persons and organizations in the District of Columbia and its environs who want to build for low-income families and agree to meet the corporation's standards.

201. ACQUISITION OF EXISTING MULTI-FAMILY RENTAL STRUCTURES AND CONVERSION TO MANAGEMENT-TYPE COOPERATIVE HOUSING

Main Investigator or Director: Earl W. Morgan.

Agency: Cooperative Housing Service Corporation, 514 Washington Building, Washington, D. C. 20005.

Research Problem. Acquisition of existing multi-family rental structures and conversion to management-type cooperative housing for low-income residents, without subsidy.

Method of Study. Experienced cooperators organize the families, instruct them in cooperative housing management, and thereafter withdraw their leadership. The combination of use of existing long-term financing, and the expertise provided by the nucleus of experienced cooperators is expected to result in monthly charges within the paying capacity of low-income families.

202. LARGE FAMILY-RENT SUBSIDY DEMONSTRATION PROJECT

Main Investigators or Directors: Edward Aronov and Eunice Grier.

Agency: National Capital Housing Authority, 1729 New York Avenue, N.W., Washington, D. C. 20430, in cooperation with Family and Child Services, and the Department of Licenses and Inspections. Pilot project report available from U. S. Government Printing Office.

Research Problem. The National Capital Housing Authority has a waiting list averaging six thousand applicants. Waiting time for large families has averaged four years and more for those displaced by public action. The conventional program was not keeping pace with the pressing

demands of large families of low-income. Furthermore, the increasing difficulty of acquiring sites for construction of large scale housing developments added a new dimension to the problem.

NCHA sought to demonstrate the feasibility, advantages, and costs of leasing, in the private market, existing structures for sublease to low-income families, with the difference between rentals charged by the private owners and the amounts the tenants can afford covered by the federal grant.

Previous Relevant Research. There appears to have been no previous research of this nature. By early 1965, the success of the demonstration was recognized by the federal government. The method demonstrated in the program became part of the National Housing Program and the Housing and Urban Development Act of 1965.

Method of Study. The Authority pays the broker or owner the negotiated rent. The Authority collects a rent from the tenant based upon his income. Although the owner is responsible for maintenance, the tenant is charged for repairs and replacements due to acts of negligence. Social and educational services are provided tenants to assist in their adjustment to adequate housing.

Major Findings. The demonstrated advantages of this program are as follows: (1) Requires less outlay of cash than building. (2) Requires less time than building. (3) Accelerates relocation of families displaced by urban renewal and other programs for urban improvement. (4) Provides housing temporarily while conventional projects are being built. (5) Helps upgrade existing private housing stock.

Based on its experience to date, NCHA believes this approach has considerable merit as a supplement to the conventional public housing program. It also has certain limitations. For example, the Authority acquires no physical assets for its expenditure and there is no addition to the housing stock. On the other hand, it provides a tool that can be used with considerable leverage in helping to upgrade deteriorated residential blocks. Another and possibly more important advantage is the degree of acceptance the program seems to receive, both from private real estate interests and the majority of tenants.

203. USE OF MODIFIED CRITERIA AND MODIFIED ANALYTICAL PROCEDURES IN DETERMINING MORTGAGE CREDIT RISKS WHERE THE MORTGAGORS ARE OF LOW-INCOME

Main Investigator or Director: Ralph H. Blodgett.

Agency: University of Florida, Bureau of Economic and Business Research, Gainesville, Florida. A semi-final report issued July, 1966.

Research Problem. To compare the results in meeting mortgage obligations achieved by a demonstration group of families in the Lincoln Estates Development (Gainesville, Florida) with those of a control group composed of the remaining families in the development, and to relate these results to a variety of characteristics of both groups of families.

It is believed that many low-income families, which would be excluded from mortgage financing and decent housing by application of standard FHA credit criteria, would make satisfactory records as mortgage debtors if granted insured loans on the basis of modified or relaxed criteria and procedures, and given much guidance and counseling.

Procedure and Method of Study. After protracted discussion and negotiations, FHA agreed to insure the loans of 50 families (the demonstration group) which could not qualify for loans under the usual standards and criteria. For these families, the usual criteria were modified or relaxed with respect to the evaluation of family income, credit records and standing, and evaluation of motivation toward home ownership. These families were given extensive guidance and counseling, but never told they were members of a special group. Their performance was observed, measured, and compared with the control group. Performance was related to a number of the family characteristics. The effects of home ownership on other relevant matters was also observed.

Major Findings. The semi-final report showed that 17.4 per cent of the payments made by the demonstration group for the last reported month had been delinquent, compared with 22.1 per cent for the control group. However, over the entire lives of the loans, delinquent payments comprised 18.0 per cent of all payments for the demonstration group and 14.0 per cent for the control group. Relative performance will not be evaluated fully until the final report is made.

Family income, per capita income, incomes of family heads, and mortgage payments in relation to family income were found to have little if any effect upon high and low delinquency ratios produced by the various families. The same was true of numbers of dependents, years of school completed, and amounts of counseling received. On the other hand, previous credit ratings, ages of family heads, and numbers of years married seemed to be closely related to delinquency ratios. Families with the best credit ratings, oldest heads, and most years of marriage tended to have the lowest delinquency ratios, and vice versa.

All but 15 of the families in the demonstration group are receiving increased incomes since acquiring their homes, though only five family heads and three spouses report having received additional education or training. Almost all of the families report increased public utility bills and increased housing costs generally in their new homes. About two-thirds of the families report increases in family debts apart from their mortgage obligations. It also appears that working members of families change jobs less frequently than formerly and that the heads of families and their spouses have greater respect for law and order since acquiring their homes. Completion is scheduled for June 30, 1967.

204 HOUSING FAMILIES OF LOW-INCOME IN STANDARD PRIVATE RENTAL APARTMENTS WITH RENT SUPPLEMENTATION

Main Investigator or Director: Alvin E. Rose

Agency: Chicago Housing Authority, 55 W. Cermak Road, Chicago, Illinois 60616

Research Problem. Housing families of low-income in standard, private rental apartments, with rent supplementation administered by a local housing authority

Method of Study. The Chicago Housing Authority was given approval by the federal government to lease 500 apartments in privately-owned buildings, under provisions of the Housing Act of 1965. Half of the units will be used to accommodate elderly people and the other half for families with children. Apartments acceptable to the Authority are leased for periods of one to three years, subject to renewal. The Authority pays directly to the owner or his agent, fair market rates for the apartments, and sublets them at lower rates to families eligible for public housing. The difference is paid annually to the Chicago Housing Authority by the federal government

205 PROVISION OF IMPROVED HOUSING FOR LOW-INCOME FAMILIES THROUGH REHABILITATION OF EXISTING APARTMENT BUILDINGS

Main Investigator or Director: Irving Gerick.

Agency: Community Renewal Foundation, Inc., 19 La Salle Street, Chicago, Illinois 60603

Research Problem. Provide improved housing for low-income families through rehabilitation of existing apartment buildings in receivership

A specially created nonprofit corporation qualifies as court-appointed receiver of apartment structures in multiple violation of local building and housing codes. It corrects the violations, applies rents in payment of the cost of repairs, and endeavors to have rents within reach of low-income families after as well as during receivership. Receiverships will be confined to buildings predominantly occupied by low-income families, not burdened by costly secondary financing, not requiring costly repairs, and which can be rehabilitated with little or no displacement of families.

206 SUPERVISED TEAM-BASED, SELF-HELP PARTICIPATION BY LOW-INCOME FAMILIES IN REHABILITATION OF DWELLINGS THEY OCCUPY

Main Investigator or Director: Cleo W. Blackburn.

Agency: Board of Fundamental Education, 146 E. Washington Street, Indianapolis, Indiana

Research Problem. Supervised team-based, self-help participation by low-income families in rehabilitation of dwellings they occupy.

Method of Study. Low-income owners of one hundred houses will be organized in work crews to rehabilitate their dwellings. Each participant team member will apply his highest level of skill, such as semi-skilled carpentry or brick masonry, in exchange for skilled team work on his home. Plumbing and electricity will be obtained by contract. Building materials supplied without charge against the grant.

207. FACTORY-BUILT COMPONENTS FOR MULTI-FAMILY LOW-INCOME HOUSING

Main Investigator or Director: Ronald Goodfellow.

Agency: Housing Research, Inc., P. O. Box 286, Michigan City, Indiana 46360.

Research Problem. Demonstrate a method of using readily available manufacturing facilities to gain cost advantages. The method is more significant than the actual form of the prototype in that the method can be applied by anyone, at any time, anywhere. The method becomes a tool by which new technological developments, new materials and manufacturing techniques, can be quickly exploited for whatever improvements or cost advantages they offer. Unlike the prototype itself, the method will not become quickly obsolete by the normal progress of industrial technology.

Significant cost reductions can be achieved by making use of the comprehensive prefabrication methods of the mobile home industry. This industry's volume purchasing and assembly-line techniques can be applied readily to production of short-run units designed specifically for use in low-income housing projects. The fabrication techniques of mobile home manufacturers readily permit limited production of specially designed units, as long as these units do not require major retooling or reorganization of the assembly line. The project will demonstrate that simple adaptations of existing jigging techniques, tooling, and materials can produce a superior housing product and can in addition expect to achieve a substantial reduction in costs.

As directed to the housing industry and mobile home manufacturers, the project will demonstrate a potential improvement of market and product. The project will indicate the presence and general nature of a housing market which manufacturers may choose to enter by offering their capabilities to development projects, or by producing units specifically designed to suit the special requirements of low-income multi-family housing. In addition it is expected that the project will indicate improvements which can be made in manufactured houses or cost advantages to be gained, by using a more advanced spectrum of materials and engineering techniques than are now found in the industry. A final report will be available at no charge early in 1967.

208. PROVISION OF HOUSING TO LOW-INCOME OWNERS OF LAND

Main Investigator or Director: Norman L. Christeller.

Agency: Scotland Community Development, Inc., Housing Committee, Bethesda, Maryland.

Research Problem. Provision of housing to low-income owners of land in excess of their residential needs through specialized procedures for its assembly and conversion to equity in new housing, provided as a planned-unit development with a homes association. Housing costs within reach of low-income families are to result from utilization of equity in land, financing under the FHA Section 221 (d) (3) below-market rate program, self-help labor, and the assistance of persons with knowledge of law, land planning and development, and construction.

209. SUPPLEMENTATION OF RENTS PAYABLE BY LARGE LOW-INCOME FAMILIES IN SECTION 221 (d) (3) RENTAL APARTMENTS

Main Investigator or Director: Cornelius J. Connors.

Agency: Boston Housing Authority, 230 Congress Street, Boston, Massachusetts.

Research Problem. Supplementation of rents payable by forty large low-income families in Section 221 (d) (3) rental apartments, with the families housed in three different developments otherwise occupied by families of moderate-income and paying full rents. Final admission of the large, low-income families, selected by local housing authority and referred to management for the several developments, will be subject to the same requirements as applied to families paying economic rents. The form of subsidy will be rent supplementation checks.

210. DEVELOP AND TEST METHODS FOR PROVIDING LOWER INCOME FAMILIES ACCESS TO OLDER BUT SOUND, EXISTING DWELLINGS

Main Investigator or Director: Edward C. Mendler, Jr.

Agency: Fair Housing, Inc., 75 Federal Street, Boston, Massachusetts.

Research Problem. Develop and test methods for providing lower income families access to older but sound, existing dwellings, for sale and rent, over broader portions of the metropolitan area and nearer places of employment of the family heads.

One hundred large families, nonwhite and others that are socially handicapped, will be carefully selected, counseled on tenant and ownership responsibilities, provided brokerage services at no cost, and advised as to sources for legal, financing and other services for prompt closing of transactions with minimum costs to the families. Supply of available dwellings is being assembled by local housing committees in each of more than forty outer urban and suburban communities, in cooperation with the owners.

211. REHABILITATION OF OLD AND NEW LAW TENEMENTS

Main Investigator or Director: Richard S. Bolan.

Agency: Joint Center for Urban Studies of the Massachusetts Institute of Technology and Harvard University, Cambridge, Massachusetts.

Research Problem. Evaluate a project being conducted in New York City, under Section 207 of the 1961 Housing Act, which is intended to demonstrate that limited housing rehabilitation coupled with rent subsidies can minimize displacement, even during repairs, of low-income families from New York City's old and early new law tenements. The potential applicability and utility of the methods derived, to New York's low-income housing stock is of particular interest.

212. PROVISION OF STANDARD RENTAL HOUSING TO LOW-INCOME FAMILIES

Main Investigator or Director: Charles W. Liddell.

Agency: United South End Settlements, 20 Union Park, Boston 18, Massachusetts.

Research Problem. Provision of standard rental housing to low-income families, through nonprofit corporation purchase, rehabilitation, refinancing, and rental operation of neglected multi-family structures, located in a conservable area. Rents within reach of low-income families will result from: possession of sufficient capital funds for property acquisition and rehabilitation to enable larger-scale operation and reduced outlay of interim financing; purchase of tax-forfeited and other lower cost properties; mass purchase of materials and equipment; use of force-account labor, to the extent practicable; eligibility for reduced tax rates; use of below-market interest financing. In addition, the nonprofit corporation will increase its equity in the rehabilitation properties to the extent necessary for keeping rents within reach of low-income families.

213. AN EVALUATION OF THE KUNDIG CENTER PROGRAM OF LOW-COST, SEMI-PROTECTIVE HOUSING

Main Investigator or Director: James T. McCuish.

Agency: Kundig Center, 2938 Ash Street, Detroit, Michigan.

Research Problem. An evaluation of the Kundig Center program of low-cost semi-protective housing currently provided in metropolitan Detroit for elderly persons of low-income, in order to assess applicability of the program in other localities.

Kundig Center leases 97 rooms in almost as many private standard homes, located within walking distance of the Center, and leases them to elderly persons at \$30 per month without profit. The subleasees obtain inexpensive but planned meals, recreational, medical, and other services for the elderly at the Center.

214. HOUSING FOR LOW-INCOME, ELDERLY HOUSEHOLDS IN A PRIVATE HOUSING DEVELOPMENT

Main Investigator or Director: Wilma Donahue.

Agency: University of Michigan, Institute of Human Adjustment, Division of Gerontology, Ann Arbor, Michigan.

Research Problem. A demonstration of supplementation of rents payable by 20 low-income, elderly households for apartments in a 142-unit, private housing development for the elderly, financed by a direct loan under Section 20 of the Housing Act of 1959. The low-income households meet the same requirements for tenancy as those households paying full rents. Difference between the rents charged for the housing and the amounts the low-income occupants can pay in proportion to income is provided to management of the housing in the form of a rent supplementation check. The county department of public welfare will continue the rent supplementation after the demonstration.

215. HOUSING LOW-INCOME FAMILIES IN PRIVATELY OWNED RENTAL APARTMENTS

Main Investigator or Director: Ruby H. Koelling.

Agency: Land Clearance for Redevelopment Authority of St. Louis County, 1440 Dielman Road, St. Louis, Missouri 63132.

Research Problem. Housing low-income families in privately owned rental apartments, located in a structure or structures also occupied by families of moderate income, paying full rents. Subsidy of the rents of the low-income families to be provided in the form of rent supplementation checks.

Twenty low-income families, displaced by urban renewal, will be housed in a new private rental development of 50 units sponsored by a limited-dividend or nonprofit corporation, under a Section 221 (d) (3) mortgage.

216. PROVISION OF HOUSING TO LOW-INCOME FAMILIES IN A SMALL URBANIZED COMMUNITY BY A NONPROFIT CORPORATION

Main Investigator or Director: Dan Armstrong.

Agency: Cranbury Housing Associates, Station Road, Cranbury, New Jersey 08511

Research Problem. Provision of housing to low-income families in a small urbanized community by a nonprofit corporation which will assemble and dispose of land, purchase and rehabilitate housing and sell it or retain it for rental, sponsor rental housing, provide technical services in connection with rehabilitation, and act as general contractor.

217. PROVISION OF OWNERSHIP HOUSING TO DISPLACED LOW-INCOME FAMILIES IN AN URBAN RENEWAL PROJECT

Main Investigator or Director: Elizabeth H. Niebyl.

Agency: Housing Authority of the Borough of Glassboro, Main and High Streets, Glassboro, New Jersey 08028.

Research Problem. Provision of ownership housing to displaced low-income families in an urban renewal project area, by use of the returns from the sale of their equities in their substandard homes to be demolished, as down payments on new homes built in the same project area.

The families acquire the dwellings as a cooperative. A small number of families who are not relocatees and do not own similar equities are invited to join the cooperative endeavor.

218. PURCHASE, REHABILITATION, AND LIMITED CONVERSION OF STRUCTURALLY SOUND BUILDINGS TO PROVIDE APARTMENTS FOR SUBSIDIZED RENTAL

Main Investigator or Director: William Reid.

Agency: New York City Housing Authority, 250 Broadway, New York, New York 10007.

Research Problem. Although it is the largest supplier of low-rent housing, the Housing Authority has been able to provide less than one per cent of its units for large families requiring five or more bedrooms. This is due to the extremely high development cost of approximately \$33,000 for a five-bedroom apartment as compared to \$19,000 for a three-bedroom unit. This project proposes to demonstrate the economic feasibility of providing such large units in existing three-story structurally sound buildings having underutilized commercial space on the first floor.

Method of Study. The project proposes to effectuate the least costly conversion consistent with decent living standards and in conformance with the New York City Building Code. The ground floor commercial space will be converted into a one- or two-bedroom apartment having a living room-dinette, kitchen, and bathroom. To accomplish this the commercial frontage will be removed and a new brick front provided. The interior partitions, the kitchen, and bath fixtures will be new. The upper two floors will be converted into a duplex apartment having at least five bedrooms and two baths. Generally, the top floor will contain four bedrooms and one bathroom with the living spaces located on the lower duplex floor.

Major Findings. Based on the findings of the Authority's Project Construction Manager, it has been determined that in contemplating rehabilitation projects of this nature the Authority should proceed on the premise that the major portion of wall/ceiling surfaces, windows, doors, roofing, plumbing and heating systems will have to be replaced. Toward this end, the Authority is experimenting with new materials for floor, wall, and ceiling surfaces such as pre-finish plywood panels, suspended acoustic ceilings and trowelled-on epoxy floor finishes. Although the rehabilitation was in fact accomplished at a higher cost than anticipated, it is still markedly lower than the cost of providing such apartments in a new construction program.

219. HOUSING FOR LOW-INCOME FAMILIES THROUGH LIMITED REHABILITATION OF EXISTING MULTIPLE DWELLINGS

Main Investigator or Director: Frances Levenson.

Agency: New York City Rent and Rehabilitation Administration, 280 Broadway, New York, New York 10007.

Research Problem. A demonstration of housing for low-income families through limited rehabilitation of existing multiple dwellings occupied by low-income families, without physical or economic displacement of the families. Limited rehabilitation includes removal of conditions typical of older tenement buildings such as individual heating, hall toilets, inadequate wiring, and obsolete and defective plumbing. Retention of low-income occupancy results from limited rent increases, based on tax abatement and rent control (providable under state law when a landlord voluntarily rehabilitates his property) and subsidy of rents where necessary.

Since the start of the demonstration in July, 1964, 254 applications have been received for rehabilitation of 486 buildings, comprising 7,895 dwelling units. FHA mortgage insurance commitments have been issued for the rehabilitation of 57 buildings, comprising 891 units. Projects involving 56 buildings with 819 apartments are in execution. Rehabilitation has been completed on 16 buildings containing 243 units. Construction is under way or about to begin on the remainder.

220. EVALUATION OF HOUSING FOR LOW-INCOME FAMILIES PROVIDED IN A MIDDLE-INCOME HOUSING DEVELOPMENT

Main Investigator or Director: Ruth M. Glover.

Agency: Fred L. Lavanburg Foundation, 270 Park Avenue, Room 1980, New York, New York 10017.

Research Problem. Evaluation of housing for low-income families to be provided in a middle-income housing development, through acquisition by a local public housing authority of an undivided interest in a housing development to be erected by a nonprofit group. Families eligible for public housing will occupy any of the apartments in the development in number proportionate to the undivided interest and have access to all supporting facilities, with the private sponsor of all development managing all apartments.

221. DEVELOPMENT OF DEMONSTRATION OF IMPROVED, COST-REDUCING METHODS FOR CONSTRUCTION OF MULTI-LEVEL APARTMENT BUILDINGS

Main Investigator or Director: Edward T. Shiffer.

Agency: Pratt Institute, School of Architecture, Brooklyn, New York 11205.

Research Problem. Development and demonstration of a combination of improved, cost-reducing methods for construction of multi-level apartment buildings, under conditions free to building code constructions typically preventing their use. "Box frame" (walls and partitions supporting slabs, without use of columns and beams), lightweight steel, and reinforced brick construction are under consideration.

A two-story test building framed half in steel and half in concrete with walls of various materials, has been constructed in Carteret, New Jersey industrial park. It is being tested rigorously, including the burning out of its interiors. The results will be applied to the building of a high-rise apartment building.

222. PROVISION OF LOW-INCOME HOUSING SERVICE ON A STATE-WIDE BASIS

Main Investigator or Director: Luther C. Hodges.

Agency: North Carolina Department of Administration, State Planning Task Force, 127 Halifax Street, Raleigh, North Carolina.

Research Problem. Provision of a low-income housing service for families of limited income and individuals such as the aged or handicapped, with particular unmet housing needs, on a state-wide basis including stimulation of low-cost housing developers and potential nonprofit developers, encouragement in the use of 221 (d) (3), Section 202 and other financing aids, and assistance to developers with market analysis, financing, and other technical problems. A published report will be available late in 1968.

223. IMPROVEMENT OF HOUSING FOR LOW-INCOME FAMILIES OCCUPYING DWELLINGS IN VIOLATION OF LOCAL STANDARDS

Main Investigator or Director: Donald F. Hunter.

Agency: Cincinnati Commissioner of Buildings, in cooperation with Housing Standards Advisors, City Hall, Cincinnati 2, Ohio.

Research Problem. Improvement of housing for low-income families occupying dwellings in violation of local standards. Routine code enforcement, supplemented with guidance and services to the families, focusing on improved use and maintenance of their dwellings in a manner both to bring the dwellings into conformity with standards and to lessen the recurrence of violations. Housing Standards Advisors will provide the services, conduct

follow-up inspections of units found in violation and with low-income occupancy explain nature of violations and alternatives for corrections necessary, and guide family in attaining compliance, while also counseling on better use and maintenance of the house, its space, and equipment. Demonstration is carried out in two census tracts of predominantly low-income, "non-urbanized" occupancy

224. HOUSING THE PHYSICALLY DISABLED AND THE ELDERLY: ITS SOCIAL, ARCHITECTURAL, AND MEDICAL IMPLICATIONS

Main Investigator or Director: Leon A. Pastalan.

Agency: Toledo Metropolitan Housing Authority, 435 Nebraska Avenue, Toledo, Ohio 43602.

Research Problem. Investigate the social, architectural, and medical factors related to designing, constructing, and operating specialized housing which would function to increase independent daily living levels of the physically disabled and the elderly. The research team is composed of specialists from sociology, physical medicine, and architecture. The program itself is composed of several interrelated phases. The initial phase, which is nearing completion, entails a social survey to establish the incidence and representative types of physical disabilities in the population to be served by the project. Additional information such as age, sex, marital status, family composition, and income will be collected. Selective information such as the number and types of disability is then to be analyzed by the architect and the physiatrist (an M.D. with a specialization in physical medicine) to establish which types and to what degree the various physical limitations are amenable to architectural engineering and what is the potential for independence if specially designed units were made available. Joint evaluations by the sociologist, architect, and physiatrist are to be conducted to anticipate problems of flexibility and adaptability of design to accommodate occupancy changes, to anticipate certain types of social pathology often attributed to faulty design, to establish measures of livability and problems of aesthetics.

These recommendations are then to be incorporated into the design and construction of a 164-unit high-rise apartment complex strategically located in an urban renewal area with maximum accessibility to social services, employment, shopping, and transportation facilities. Once the structure is built, initial selection of tenants made, and the building occupied, there will be a series of studies conducted to determine the various patterns of adjustment on the part of the occupants in terms of their adjustment to each other and to their special living accommodations. Complete report available without charge within two and a half years from Toledo Metropolitan Housing Authority.

225. PROVISION OF NEW, PRIVATELY DEVELOPED DWELLINGS TO LOW-INCOME FAMILIES

Main Investigator or Director: Charles E. Norman.

Agency: City of Tulsa, Municipal Building, Tulsa, Oklahoma, in cooperation with The Home Builders Association of Tulsa.

Research Problem. Provision of new, privately developed dwellings to low-income families under a specialized "conditional purchase" or lease with option-to-buy plan, enabling their initial occupancy as tenants, the improvement of their incomes and other preparation for ownership during leasehold, and thereafter acquisition of the leased dwellings by the families. One hundred new houses are being built on lots located in an urban renewal project area.

226. HOUSING FOR ELDERLY PERSONS

Main Investigator or Director: Vincent Piper.

Agency: Commonwealth of Pennsylvania, Department of Public Welfare, Office for the Aging, in cooperation with Office of Public Assistance, Pennsylvania Citizens Council, and related groups. The Fels Institute of Local and State Government, University of Pennsylvania, will evaluate the findings.

Research Problem. To utilize all available programs of housing and related facilities, exclusive of public housing, to add units of reasonable rental to the housing market. (1) Through the use of questionnaires, informational materials, news releases, brochures, conferences, displays, etc., to stimulate eligible nonprofit groups throughout the state, including churches, unions, fraternal and civic groups, and public bodies to undertake the sponsorship of new rental housing projects using available federal financing. (2) Selecting several Pennsylvania communities of various sizes and types of housing or building codes and code enforcement procedures, to inspect the rental units of a random sample of old age assistance recipients and contact the property owners concerning housing deficiencies. Contact will also be maintained with appropriate municipal agencies and concerned civic groups. An Advisory Committee of 15 members will be available for advice, counsel, and assistance to the Project staff.

227. PROVISION OF SALES AND RENTAL HOUSING THROUGH A CITY-OPERATED SERVICE TO LOW-INCOME FAMILIES

Main Investigator or Director: Ivan B. Gluckman.

Agency: City of Philadelphia, Office of Development Coordinator, 705 City Hall Annex, Philadelphia, Pennsylvania.

Research Problem. Provision of sales and rental housing through a city-operated service for continuous inventory, inspection, listing and referral to low-income families, of vacancies in standard private dwellings in the Philadelphia Metropolitan Area, supplemented by financing advice to the families in connection with the purchase and rehabilitation of the dwellings.

228. EVALUATION OF THE HOUSING PROGRAM FOR LOW-INCOME FAMILIES

Main Investigator or Director: Thomas J. McCoy.

Agency: Philadelphia Housing Authority, 2012 Chestnut Street, Philadelphia, Pennsylvania.

Research Problem. Analysis and evaluation of the Philadelphia Housing Authority's acquisition, rehabilitation, and utilization of existing structures to house low-income families.

The Housing Authority is expanding its present small and geographically limited program of utilizing existing structures for housing low-income families. A large continuing program in many areas of the city is contemplated. The evaluation of the initial program, its technical, financial, and human ramifications, is designed to provide guide lines for the execution of the large future program, as well as generally useful insights into the methods and costs of rehabilitating older structures.

229. PURCHASE OF STRUCTURES FOR REHABILITATION AND RESALE TO LOW-INCOME FAMILIES

Main Investigator or Director: Drayton S. Bryant.

Agency: Queen Village, Inc., 1400 South Penn Square, Room 2116, Philadelphia, Pennsylvania 19102.

Research Problem. Purchase by a nonprofit corporation, representing neighborhood institutions and residents, of about 100 structures for rehabilitation and resale to low-income families. In addition to its being handled by a nonprofit body, the housing is expected to market within low-income reach because of the availability of low-priced, tax-forfeited, and other properties; minimized acquisition cost; use of force-account labor for rehabilitation, to the extent feasible; no charge for brokerage in selling the properties; and low-cost FHA insured financing. Properties are located in a conservable area. Public planning, renewal, code enforcement, and other officials are cooperating.

230. USE OF GUIDED, TEAM-BASED, SELF-HELP LABOR IN THE FABRICATION OF BUILDING PANELS AND THEIR ASSEMBLY AS LOW-COST DWELLINGS

Main Investigator or Director: Nick Wyckoff.

Agency: Housing Research and Development Company, Inc., P. O. Box 2012, Rapid City, South Dakota 57702.

Research Problem. The use of guided, team-based, self-help labor in the fabrication of building panels and their assembly as low-cost dwellings. The insulated nailed panels, made of plywood, will be light in weight, easily joined, and erectible by unskilled persons, rapidly and without the use of cranes. A prefabricated mechanical core will be used. The self-help labor is expected to result in dwellings meeting FHA standards and provided at sufficiently lowered costs to enable low-income families to conclude purchase of them, subject to FHA insured mortgages.

231. PROVISION OF IMPROVED HOUSING TO LOW-INCOME FAMILIES THROUGH A NEIGHBORHOOD-BASED HOUSING INFORMATION CENTER

Main Investigator or Director: Lucinda J. Gordon.

Agency: Milwaukee Urban League, 936 W. Center Street, Milwaukee, Wisconsin 53206.

Research Problem. Provision of improved housing to low-income families through a neighborhood-based housing information center and clinic, providing guidance to tenants, owner-occupants who want to or must improve their properties, and families preparing to purchase housing.

Method of Study. The center's staff operates in five neighborhood stations on days and during hours convenient to the residents. Tenants are advised on code standards, maintenance, and problems with landlords. Families upgrading their properties are assisted with interpretation of housing regulations, determining priorities among needed improvements, locating financing, finding reliable contractors, etc. Advice to home purchasers concerns such matters as valuation, financing alternatives, settlement charges, and budget-to-housing. A report is to be issued in the near future.

232. THE IMPACT OF CHANGES IN HOUSING AND NEIGHBORHOOD ON THE SOCIAL LIVES OF URBAN FAMILIES

Main Investigator or Director: Charles Tilly.

Agency: University of Toronto, Department of Sociology, Toronto, Canada.

Research Problem. Analyze and evaluate a program of rent subsidies to low-income families displaced by urban renewal. The program was organized by the Boston Housing Authority. A major aim is to distinguish between the effects of moving as such and the impact of different types of housing and neighbors on the social relations of this predominantly Negro group of families.

Method of Study. The main sources of data are before, after, and follow-up interviews with members of about 160 households crudely matched for size, race, income, and old neighborhood and differing markedly in character and location of new housing. Preliminary reports expected middle of 1967.

URBAN RENEWAL DEMONSTRATION PROJECTS
(Listed alphabetically by states)

233. CORRECTING AND AVERTING THE BLIGHTING EFFECT OF CHANGING SUBSOIL CONDITIONS

Main Investigator or Director: John G. Bonham.

Agency: Redevelopment Agency of the City of Calexico, California.

Research Problem. Demonstrate how the blighting effect of changing subsoil conditions may be corrected and averted.

Method of Study. Using the Hermosa residential area of Calexico, the demonstration project will: (1) analyze the subsoil and the structural damages caused by changing subsoil conditions, in the field and in laboratories under professional supervision; (2) conduct an engineering study of alternative foundation treatments; (3) carry out recommended corrective measures to stabilize the foundations and the subsoil; (4) prepare, publish, and distribute a final project report on the results of the demonstration.

234. REDESIGN AND RECONSTRUCTION OF A DOWNTOWN AREA OF WASHINGTON, D. C.

Main Investigator or Director: Not reported.

Agency: Government of the District of Columbia, Department of Highways and Traffic, Washington, D. C. 20004.

Research Problem. To test the feasibility of redesigning a street in what should be a predominantly pedestrian area--where a mall is not feasible--to serve primarily the pedestrians' needs. Essential vehicles come into the area on the pedestrians' terms. The project extends from 12th to 14th Streets, northwest along F Street. The objectives of the demonstration are to: (1) enhance the attractiveness of the area; (2) make pedestrian movement easier and safer; (3) make shopping more convenient; (4) stimulate private rehabilitation and reconstruction; (5) provide for essential traffic movement and goods deliveries; (6) provide an appropriate setting in the heart of the nation's Capital.

Previous Relevant Research. The idea for the project was first presented in the Action Plan for Downtown in 1962. A subsequent study, Downtown Streets and Places, determined the location and set forth the basic concept: street trees, midblock crosswalks, appropriate paving materials, special lights, benches, kiosks, and pedestrian shelter.

Method of Study. Before construction began on the two blocks, the space from curb to curb (60 feet wide) generally carried two lanes of traffic in each direction. The existence of streetcar tracks, in the center of the street, precluded more efficient use of this space for safe vehicular movement. With the new design, two lanes of traffic can still move in each

direction except when trucks are unloading at the curb. The middle 20 feet of the street, where the streetcar tracks used to be, is now used for a pedestrian promenade. With a surface of Whitacre Greer bricks, the promenade contains 53 "instant" trees--forty 25 foot red maples, thirteen 40 foot pin oaks, 80 new street lights, 16 Carnelian granite benches, four sales kiosks (two for flowers and two for newspapers) and three specially designed telephone kiosks. New trash receptacles and bus signs were developed. To make pedestrian movement easier, six new crosswalks have been provided in addition to the corner crosswalks. At two locations, curbside ramps are provided for the convenience of the handicapped in wheelchairs. The crosswalks are made of Hastings blocks, with granite stone borders for clear identification. Vehicles are to yield to pedestrians in the crosswalks. A continuous canopy, to provide visual and physical continuity, as well as pedestrian shelter, is to be installed early in 1967.

To evaluate the demonstration, before and after tests are being conducted. These tests, which began in September, 1965, include: (1) pedestrian volume counts; (2) traffic volume counts; (3) generation of mass transit trips; (4) retail sales; (5) attitudes toward downtown. Testing of the effectiveness of the project will be completed in the spring of 1968, with a project report available in the summer of 1968.

235. LONG-RANGE EFFECTS OF RELOCATION ON FAMILIES MOVING FROM AN URBAN RENEWAL AREA

Main Investigator or Director: Daniel Thursz.

Agency: Health and Welfare Council of the National Capital Area, Inc., 1101 M Street, N. W., Washington, D. C. 20005. This study was completed and published November, 1966, under the title Where Are They Now?

Research Problem. This is a follow-up of previous research published by the District of Columbia Redevelopment Land Agency in 1964 under the title, Community Services and Family Relocation. The original research selected 396 families for study, divided into carefully matched demonstration and control groups of 198 families each. Families in the demonstration group were given special help in finding employment, obtaining medical care, or meeting other problems made urgent by the relocation imposed upon them. The other group was not. The present study evaluates the effectiveness of the intervention methods with the demonstration group, and compares the experience of both groups.

Hypotheses. While this study is, in the main, an exploratory research, there were two specific hypotheses to test: (1) that evicted slum dwellers create new slums where they move, or at best move into other slums; (2) the grief due to a lost home and community lingers for many years, and that social fabric once destroyed is not replaced in five years.

Method of Study. Interview as many of the demonstration group families as possible, five years after contact had been terminated, to determine their subsequent experiences. A total of 98 interviews were completed.

Major Findings. (1) There was a dramatic improvement in the physical environment of the families. The evidence is overwhelming that relocation forced a major improvement in the living conditions of the families involved and that this improvement persisted through the five years between the original research and the present follow-up. (2) The social and psychological conditions of these families was found to be much less satisfactory. The study does not have data on the level of anomie among these families at the time of the original study five years earlier. But a shockingly high degree of anomie was found in the current investigation. (3) A recurring theme in the current interviews was the nostalgia for the various organizations and settlement houses that existed in the former neighborhood and provided a whole series of services in the health, recreation, informal education and counseling areas. The relocatees found few equivalent agencies in their new neighborhoods which added to their sense of isolation. (4) Those relocated to public housing consistently fare better than their counterparts in private dwellings. The former were found to be less anomic, more hopeful of the future, having a stronger sense of belonging to their new neighborhoods, a greater knowledge of community institutions, a stronger belief that they could organize for a community improvement, and acceptance of government actions to eliminate blight. (5) Some fundamental problems associated with poverty continued or even increased during the five years following the relocation.

236. VIEUX CARRE PRESERVATION DEMONSTRATION PROJECT

Main Investigators or Directors: L. Vaughan Howard, Charles J. Rivet, Carl Feiss, Hammer, Greene, Silver & Associates, and Marcou, O'Leary & Associates.

Agency: Bureau of Governmental Research, Inc., 822 Perdido Street, New Orleans, Louisiana, under contract with the City of New Orleans. Publication planned for release after May, 1967.

Research Problem. Develop a study which will make it possible to preserve the tout ensemble of the Vieux Carre area while at the same time allowing it to develop and continue in use as a living part of the city. The purpose is to develop a plan or model which can be applied to the preservation of other historic and/or architecturally important areas throughout the nation. The project is based on the premise that legal, administrative, planning, economic, and financial systems can be devised which will allow historic or architecturally-important areas to be maintained as living entities of a community's activities rather than letting them disappear in the name of "progress" or putting them into the category of museum pieces meant only for viewing.

Method of Study. The study has been divided into three phases: inventory, planning, and recommendations. A physical inventory was made of each structure in the Vieux Carre in order to determine its proper land use, physical condition, architectural or historical importance and worth of preservation as a part of the scene. Materials developed by the Tulane University School of Architecture's Vieux Carre Survey are an extremely

valuable source. A supplemental study is being made to determine the physical and economic impact of a proposed expressway which will run along the riverfront area of the Vieux Carre. Under review at present is a series of planning concepts which have developed from the physical study. A report on the economic impact of the French Quarter and its resident and tourist trade is being prepared. Administrative recommendations also are in draft form. New techniques include development of comprehensive numerical acting scales for structures, use of models and microphotography, investigations of use of sociological data in preservation criteria, and introduction of the concept of the tout ensemble into historic preservation work--as well as such administrative considerations as a cooperative private, municipal, state and federal effort in urban planning and development.

237. ADMINISTRATIVE ORGANIZATION FOR COMMUNITY RENEWAL, TOWN OF BROOKLINE, MASSACHUSETTS

Main Investigators or Directors: Richard J. Olsen, Sr., Robert J. M. O'Hare, and Edward J. Lynch.

Agency: Boston College, Bureau of Public Affairs, Chestnut Hill, Massachusetts.

Research Problem. To furnish the Town of Brookline with a proper evaluation of the following agencies to carry out a Community Renewal program: Housing Authority, Redevelopment Authority, Health Department, Building Department Planning Board, Fire Department, and chief executive. Study consists of Part I, Findings, and Part II, Recommendations.

238. REHABILITATION AND PRESERVATION OF HISTORIC COMMERCIAL AREAS

Main Investigator or Director: Howard Baptista.

Agency: New Bedford Redevelopment Authority with the Corinthian Conservation Company, Inc., as prime consultant, with support from the New Bedford City Planning Department and the Waterfront Historic Area League in addition to the major support provided by the U. S. Department of Housing and Urban Development. Report to be available without charge from the New Bedford Redevelopment Authority by the summer of 1967.

Research Problem. (1) To investigate the special characteristics, distinguishing features, and particular renewal and rehabilitation requirements of historic commercial areas, as distinct from other types of historic areas. (2) To develop renewal and rehabilitation goals, objectives, criteria, standards and implementation programs which will encourage sympathetic revitalization of such areas as useful and distinctive precincts of larger urban concentrations.

Previous Relevant Research. College Hill Study of Historic Area Renewal, Providence, R. I.; Preservation Planning Report, Newport, R. I.,

Preservation Society of Newport County, 1960; Programming Historic Preservation in Annapolis, Maryland, Historic Annapolis, Inc., 1963; Preserving Historic America (DHUD, June, 1966); Historic Preservation Through Urban Renewal, Urban Renewal Administration, 1963.

Hypothesis. That structures and areas of historic and architectural merit are valuable aspects of urban form, and can be retained and used as a focus for planned renewal of a deteriorated and blighted non-residential area.

Method of Study. Construction of a research model, using two basic controls, one physical and the other administrative. The physical control is the case study area, the Waterfront Historic District of New Bedford (a planning and administrative definition of the boundaries of the case study area). The administrative control is the combination of available development aids and requirements of various public and private programs, directed toward renewal of non-residential urban areas. Elements of the model are: (1) Analysis and description of existing condition and characteristics of the case study area and its relationship to surrounding sectors of the central city and waterfront. This includes physical condition and characteristics of structures; physical condition and characteristics of the area; physical condition, efficiency and adequacy of supporting services; values of buildings and areas--economic and functional, and associative. (2) Description of goals for conservation and renewal of the historic and functional environment. (3) Development of objectives to lead to the realization of conservation and renewal goals, including a three dimensional urban design concept, and derivation of land-use and development standards which will support conservation and renewal goals. (4) Description and analysis of implementation program requirements and adaptability to the realization of conservation and renewal goals. (5) Application of design, administrative, and economic solutions to the case study area.

239. COORDINATION OF URBAN RENEWAL ACTIVITIES WITH ANTI-POVERTY AND COMMUNITY PROGRAMS IN CORINTH, MISSISSIPPI

Main Investigators or Directors: Troy Norris and Thomas Coleman.

Agency: Urban Renewal Agency of Corinth, Mississippi.

Research Problem. Report how urban renewal activities in the City of Corinth are being coordinated with anti-poverty and community development programs in the city and nearby counties.

240. URBAN RENEWAL DESIGN COORDINATION

Main Investigators or Directors: G. E. Pake, John R. Passonneau, and Roger Montgomery

Agency: Washington University, Urban Renewal Design Center, St. Louis, Missouri

Research Problem. Preparation and publication of a report on urban renewal project design coordination, based on information and data already collected in field studies supported by the Rockefeller Foundation and Washington University. It will describe the techniques used on achieving urban renewal design coordination in projects in various cities. A summary of these experiences is expected to be valuable to other communities in planning and carrying out their own urban renewal design programs.

241. PHILADELPHIA'S SKID ROW: A DEMONSTRATION IN HUMAN RENEWAL

Main Investigator or Director: Irving W. Shandler.

Agency: Temple University, Center for Community Studies, in cooperation with the Greater Philadelphia Movement and the Philadelphia Redevelopment Authority, 211 S. Broad Street, Philadelphia, Pennsylvania 19107. For earlier pilot studies, see Research Digest entries 8:1-63 and 64.

Research Problem. An action-research demonstration project to determine whether Skid Row can be controlled; whether the Skid Row men can be motivated to accept help and become an integral part of the community again. Since 1956, Philadelphia has been actively engaged in trying to eliminate Skid Row. Its activities led eventually to the action-research demonstration of which the Diagnostic and Relocation Center is the hub.

Method of Study. The DRC offers supportive and therapeutic services within the framework of a research design. In addition to providing some economic security, medical and psychiatric help, the DRC offers counseling and aid in relocation through the services of caseworkers. The efforts and results of the DRC are then analyzed.

Major Findings. Men are not born on Skid Row, and a significant number of them can be helped. As of December 31, 1964, the Center had already relocated 409 such men. Ninety-day follow-up interviews conducted with 115 relocatees indicate that about 86% have remained off the Row. Of the 54 sample men on whom one-year follow-up interviews have been completed, almost 67% have been able to continue to function out of the Skid Row culture.

Any community planning a similar project should consider these points: (1) Use ex-Skid Row men as contacts. (2) Employ a "client-oriented" staff. (3) Offer tangible assistance. (4) Act as a "door opener" to public welfare, medical, and vocational rehabilitation facilities. (5) Offer each man a large amount of personal attention. (6) Contact and gain support from key community organizations. (7) Spark the interest of mass media. (8) Take the profit out of the Row by working for appropriate supervision and licensing of bars, rooming houses, hotels, day employment agencies which make money off the Row. If they make no

money these businesses will decrease to a point where they do not attract or sustain men. (9) Urge review of the role of the missions. For years the missions partially filled a vacuum of tremendous need. But now the average mission as currently operated contributes to the dependence of the man on the Row. (10) Assist the community in developing both acute and long-term treatment centers for alcoholism.

BRIEF MENTION

NEW URBAN AND REGIONAL RESEARCH AND TRAINING PROGRAMS

Institute of Urban Ecology at University of Southern California

In June, 1966, the University of Southern California created an Institute of Urban Ecology. Its purpose is to establish a community of scholars and policy leaders committed to achievement of the optimal physical and social environment for urban man in terms of his biological and mental health, his comfort, efficiency, and well-being. By identifying and removing impediments to urban environmental quality improvement through an integrated program of interdisciplinary research, graduate education, career training, and community information services, the Institute hopes to achieve these aims.

The Institute's Program includes: (1) inter-disciplinary graduate education; (2) development of inter-university instructional materials; (3) regional environmental monitoring of activities involving the collection of environmental quality and impact data in a regional data bank; (4) participation in the development of computer training exercises and urban simulation models; (5) interdisciplinary research concerned with both the identification and solution of environmental problems; (6) special conferences and community programs designed to bridge the professional community of scholars and those urban citizens who are leaders of thought, policy formulation, and action in urban areas; (7) youth service, teacher, and college faculty programs designed to develop increased interest in urban ecology and related fields.

Urban Economics Program at UCLA

Supported by a \$75,000 grant from Resources for the Future, the University of California at Los Angeles began a program of training for graduate students and post doctoral scholars in urban economics. Initiated in November, 1965, it is scheduled to be terminated in October, 1968. The program consists mainly of a series of workshops in which faculty, selected graduate students, and fellows participate.

PhD in City Planning Offered at Berkeley

A new PhD program in City Planning was first offered at the University of California's Berkeley campus in the fall of 1966. Each student must qualify in three fields. Planning Theory is required. A second field may be one of the following: Urban Spatial Structure, Regional Development, Housing and Urban Renewal, or Comprehensive Urban Design. The third field is any related scholarly discipline of the student's choice. Completion of a dissertation is also required for the degree.

RESEARCH MATERIALS AND METHODS

Research on Careers in Urban Professions

The Department of Urban Affairs at the University of Pittsburg is conducting a continuing project of collecting information on education and career opportunities in the urban professions. In January of 1966, the project published a pamphlet entitled Career and Educational Opportunities in the Urban Professions, under the sponsorship of the Murray Seashagood Good Government Fund of Cincinnati. The publication was prepared for students, teachers, placement officers, vocational counselors, government agencies, professional associations, foundations, and organizations interested in personnel requirements, career opportunities, and educational programs in the urban field. Urban careers and relevant education programs in nineteen professional fields are listed, including: urban public administration, city and regional planning, housing administration, urban renewal and community development, social service and welfare administration, community action and opportunity development, and public health administration. For further information on current research write: Careers Bulletin Editor, Graduate School of Public and International Affairs, University of Pittsburg, Pittsburgh, Pennsylvania 15213.

The Homes Association Handbook

The Homes Association Handbook, Technical Bulletin 50. The Urban Land Institute, 1200 18th Street, N. W., Washington, D. C. 20036. June, 1966, 422 pp. \$10.00 per copy.

This publication, an expanded version of the previous handbook, is considered to be the most authoritative guide to planning, organizing, and operating Homes Associations. The Handbook now contains a complete subject index and a thorough comparative analysis of ULI-VA legal forms used in formulating homes association charters and by-laws. A major feature is on a highly practical and desirable way to maintain open spaces, recreation centers, and other common facilities found in today's newer residential developments.

AIP Research

AIP Planning Research 1966. American Institute of Planners, 917 Fifteenth Street, N. W., Washington, D. C. 20005. \$3.00 per copy

With the establishment of its Division of Planning Research (see Digest 12:2 page 101), The American Institute of Planners is becoming increasingly involved in the research aspects of planning practice. A number of technical panels were organized as part of the Institute's 1966 National Conference in Portland, Oregon, with a view to communicating recent research results to the profession. Planning Research 1966 contains the proceedings of four of these panels, dealing respectively with Plan Making, Plan Implementation, Information Systems, and Data Series.

Industrial Plant Locations Data Bank

The University of Connecticut, Center for Real Estate and Urban Studies, at Storrs, Connecticut, is sponsoring a data bank of industrial plant locations and relocations in Connecticut. Each such location is classified by town, economic region, two-digit industrial group, date, and size category according to number of employees. The research is being performed by William Kinnard, Jr., Director of the Center, and Eugene J. DeFrilvio of the Department of Finance. This is a continuing project with no established completion date. Data and print outs will be available on a nominal fee basis.

Local Planning Administration Text Being Revised

Local Planning Administration, first published in 1941 by the International City Managers' Association, is being updated and revised. The editors of the new edition are W. I. Goodman, Department of Urban Planning, and Eric C. Freund, Bureau of Community Planning, University of Illinois, Urbana. This book has remained the only comprehensive planning text available for teaching and reference purposes in the United States.

The text is being rewritten, the coverage expanded, the illustrations revised, and the format and method of printing improved. The book is to be published in mid 1967 and will be available from the International City Managers' Association, 1313 E. 60th Street, Chicago, Illinois. The price has not yet been determined.

Cost of Financing Virginia Municipal Highways. University of Virginia, Institute of Government. For additional information contact Robert J. Austin.

A survey of local highway finance, conducted for the Virginia Department of Highways and the United States Bureau of Public Roads, is being published on an annual basis by the Institute. The report is designed to record the annual receipts and expenditures of local governments relative to roads and streets, parking facilities, and allied street functions for the preceeding fiscal year. Questionnaires, audits, interviews, and data from the Virginia Department of Highways and the Bureau of Public Roads provide information for the reports. Data are presented for all incorporated cities and towns as well as counties in Virginia.

BIBLIOGRAPHIES AND RELATED SERVICES

ASPO Film Bibliography

Motion Picture Films on Planning, Housing, and Related Subjects--A Bibliography. American Society of Planning Officials, Revised, 1966. \$2.00 per copy; \$1.50 to ASPO members.

Contains 127 entries arranged topically under these subject headings: general, commercial and industrial, conservation and recreation, governmental

services, sanitation and health, transportation, and urban renewal and housing. Each entry gives: data, summary of subject matter, length, number of millimeters, whether black and white or color, film distributor, cost of rental and purchase. A list of film distributors is included.

Metropolitan Government and Politics

Metropolitan Politics. Charles Press, Michigan State University, Institute for Community Development, Bibliography No. 15, October, 1965.

A selected list of basic texts, readers, and journals, as well as over 200 less basic publications on metropolitan politics. Subject areas include: citizen participation, political parties and officials, state and national involvement, governmental policies, and politically relevant subcultures. Materials are arranged topically, and entries then listed alphabetically by author within each subject area

Council-Manager Government, 1960-1964: An Annotated Bibliography. Michigan State University, Institute for Community Development and Services, and the International City Managers' Association, 1965. \$2.00 per copy.

Recognizing the growing importance and popularity of the council-manager form of government, and the consequent proliferation of literature on this subject, the bibliography seeks to bring together references and annotations of the best of this writing as a permanent reference source for city managers and other interested persons. Developments since 1940, as well as indications of probable future trends, are included in the publication. Nearly all the 336 entries are annotated. Subject areas covered include: history and general background of city-manager government, initiating the council-manager plan, the city manager, the council-manager plan, and intergovernmental relations.

Real Estate

California Real Estate Bookshelf Harry O. Bain, University of California (Berkeley) Institute of Urban and Regional Development, 1966 Revised Edition, 179 pp.

Originally published in 1959, the California Real Estate Bookshelf is revised and updated biennially to include the latest references to real estate and related fields. Though selected primarily to aid real estate practitioners, the bibliography should be useful to persons in allied fields and those engaged in real estate study, teaching, or research.

Governmental Programs

Catalogs and Other Information Sources on Federal and State Aid Programs, A Selected Bibliography. Advisory Commission on Intergovernmental Relations, May 31, 1966, 11 pp.

Identifies and describes those catalogs and handbooks published by various federal, state, and private agencies which list federal and state aid programs. State reports include two categories--catalogs of federal aids to the state, and catalogs of state aids to local communities. Does not include references to many individual program description guides and handbooks published by administering agencies and bureaus.

Handbook of Federal Aids to Communities, 1966 Edition. Available from U. S. Government Printing Office, Division of Public Documents, Washington, D. C. 20402, Catalog No. C46.8: C73/966. 111 pp. \$.60 per copy.

A guide to available federal services and resources that may be helpful to the increasing number of communities seeking to develop or improve their facilities and diversify or expand their economies. This handbook outlines several types of community assistance offered by federal agencies and tells where complete information may be obtained.

Directory of Governmental Services Available to Colorado Municipalities. N. Joseph Cayer, University of Colorado, Bureau of Governmental Research and Service, Boulder, Colorado, 1966, 82 pp.

This directory is intended to aid municipalities in locating the appropriate agency for assistance in executing specific problems or programs. It is divided into two major sections. The first consists of an alphabetical listing of agencies, describing the services they provide. It is subdivided into Colorado State Agencies, United States Government Agencies, and Non-Governmental Agencies. Information regarding charge for service, publications, mailing address, and telephone number of each agency is listed. The second section indexes the entries according to the types of services offered.

Highway and Transportation

Bibliography on Roadside Development and Beautification. Highway Research Board, 1965. 25 pp. Available from Publications Department 805, 2101 Constitution Avenue, N. W., Washington, D. C. 20418.

Lists publications on highway aesthetics and roadside development in roadway location and design; conservation of natural resources in highway construction; safety in roadside development; rest areas; scenic turnouts and roadside parks; erosion control; landscape plantings; roadside maintenance; and legal authority for land acquisition and control. Under each of these subjects, all publications concerned with roadside development issued by HRB since 1950 are listed chronologically.

Automobile Parking, Bibliography 39. Highway Research Board, August, 1966. Available from Highway Research Board, Publications Department 805, 2101 Constitution Avenue, N. W., Washington, D. C. 20418. \$1.20 per copy.

This bibliography contains 120 entries concerning pertinent articles on automobile parking, published from November, 1964, through October, 1965. Entries are arranged alphabetically by author for the year in which they were originally published. Indexes of author, geographic location, and subject are also provided.

Selected References on Highway Capacity, No. 31, July, 1966. University of California (Berkeley), Institute of Transportation and Traffic Engineering.

Lists 454 references on highway capacity, organized according to the chapter headings in the Highway Capacity Manual: traffic characteristics, factors affecting capacity and service volumes, at grade intersections, weaving, ramps, freeway and other expressways, streets and highways without access control, and bus transit. With each group, U. S. publications and those of other countries are separated, and then arranged in chronological order.

Current Literature in Traffic and Transportation. Northwestern University, Transportation Center Library, 1810 Hinman Avenue, Evanston, Illinois. \$5.00 per subscription overseas rate, \$5.25.

Published monthly, this bibliography serves as a guide to pertinent material on traffic and transportation. Its entries are gathered from foreign and domestic periodicals, books, research reports, and government documents. A sample copy is available upon request.

Recreation Sources

Index to the Literature of Leisure, Recreation, Parks, and other Recreation Resources, A Pilot Model Developed at the University of Illinois, Department of Recreation and Municipal Park Administration by Allen V. Sapora and Mary A. Vance. National Recreation Association, 8 W. Eighth Street, New York, New York 10011, June, 1965, 252 pp.

Population Studies

A Reference Supplement to Population Bulletin, Bibliography on Population. Population Reference Bureau, Inc., 1755 Massachusetts Avenue, N. W., Washington, D. C. 20036. August, 1966, 20 pp.

An introductory bibliography, prepared to serve as a reference guide to the significant works in the English language that deal directly with subjects concerning population. The publication contains 260 unannotated entries and covers the following subject areas: population; general and regional studies; fertility and fertility control; mortality and health; migration; urbanism; food, land, resources, and ecology; demographic and social interrelations; Catholic views on population and fertility; bibliographies; United Nations and United States Government publications; periodicals. Standard works of outstanding merit are noted.

Implementation of Open Space Programs

The Implementation of Public Programs of Open Space. William I. Goodman, University of Illinois, Bureau of Community Planning.

One of the most persistent challenges related to the implementation of open space programs is the basic need to define terms. While elaborate machinery has been devised at both federal and state levels to advance the cause of open space, the concepts remain ill-defined, or at best, fluid. This study examines many of the problems involved in the definition benefits and applicability of open space through a survey of recent literature and of federal, state, and local programs involving open space. It includes an analytical matrix of these programs, providing a summary of vital information with facility. This work is related to a bibliography compiled by Michael A. Carroll, Open Space Planning: A Selected Bibliography (see Digest 12:2, page 107).

CONFERENCES

Planning Policy Conference

"Administration and Coordination of Federal Urban Research" was the subject of a paper discussed at the AIP (American Institute of Planners) Government Relations and Planning Policy Conference in Washington, January of 1967. This paper, which had been prepared by Joseph L. Fisher of Resources for the Future, served as a basis for the subsequent adoption of a policy statement on federal urban research by the AIP Board of Governors. Specific proposals covered by the policy statement include formation of a National Council on Urban Studies and greater federal support for the training of urban researchers.

MISCELLANEOUS

Family Health Centers in Chicago

The Federal Office of Economic Opportunity has announced approval of two million dollars in grants to establish family-oriented health centers in two poverty areas of Chicago. Need for the centers was demonstrated in a comprehensive plan developed by a planning team working with the welfare council on behalf of the Chicago Board of Health, to provide city-wide health care for the poor. The centers will offer prenatal and child care, preventive medicine, diagnostic and medical treatment, physical therapy, chronic and long-term ambulatory care, mental health and personal health counseling, and other services. The centers are expected to open early in 1967.

AGENCIES AND LOCATIONS

For the convenience of our readers, those Agencies conducting the projects carried in this issue of the Digest are listed below along with their locations.

Albert Einstein College of Medicine - Morris Park Ave. and Eastchester Road,
Bronx, New York.

American Society of Planning Officials - 1313 E. 60th St., Chicago, Illinois 60637.

Arizona State University - Tempe, Arizona.

Auburn University - Auburn, Alabama.

Brandeis University - Waltham, Massachusetts.

Brown University - Providence, Rhode Island.

State of California, Department of Youth Authority - 401 State Office Building No. 1,
Sacramento 14, California.

University of California - Berkeley, California 94720.

University of California - Los Angeles, California 90024.

University of California - Richmond, California.

Center for Urban Education - 33 W. 42nd Street, New York, New York 10036.

University of Chicago - Chicago, Illinois 60637.

University of Colorado - Boulder, Colorado 80304.

Colorado State University - Fort Collins, Colorado.

Columbia University - 605 W. 115th St., New York, New York 10025.

Commission on Professional and Hospital Activities - First National Building,
Ann Harbor, Michigan 48108.

University of Connecticut - Storrs, Connecticut 06268.

Cornell University - Ithaca, New York.

University of Delaware - Newark, Delaware.

Drexel Institute of Technology - Philadelphia, Pennsylvania.

Federal Reserve Bank of Minneapolis - Minneapolis, Minnesota.

University of Florida - Gainesville, Florida 32603.

Florida State University - Tallahassee, Florida.

University of Georgia - Athens, Georgia.

State of Hawaii, Department of Planning and Economic Development - 426 Queen St.,
Honolulu, Hawaii 96813.

Highway Research Board - 2101 Constitution Ave., Washington, D. C. 20418.

State of Illinois, Geological Survey - Natural Resources Building, Urbana,
Illinois 61801.

University of Illinois - Urbana, Illinois 61801.

University of Iowa - Iowa City, Iowa.

Johns Hopkins University - Baltimore, Maryland.

Joint Center for Urban Studies - 66 Church St., Cambridge, Massachusetts.

Kansas State University - Manhattan, Kansas.

Kent State University - Kent, Ohio 44240.

Loyola University - Chicago, Illinois.

University of Maine - Orono, Maine 04473.

Massachusetts Institute of Technology - Cambridge, Massachusetts 02139.

University of Michigan - Ann Arbor, Michigan 48104.

University of Missouri - Columbia, Missouri 65202.

Mississippi State University - State College, Mississippi.

National Association of Housing and Redevelopment Officials - 1413 K St., N. W.,
Washington, D. C. 20005.

National Capital Transportation Agency - 1634 Eye St., N. W., Washington, D. C.
20432.

University of Nebraska - Lincoln, Nebraska.

University of Nevada - Reno, Nevada.

State of New York, New York State Joint Legislative Committee on Metropolitan and Regional Areas Studies - 393 7th Ave., New York, New York.

New York University - Washington Square, New York, New York.

The City University of New York, Hunter College - 33 W. 42nd St., New York, New York 10036.

State University of New York, Medical School - Buffalo, New York.

State University of New York, Upstate Medical Center - Syracuse, New York.

University of North Carolina - Chapel Hill, North Carolina.

North Carolina State University - Raleigh, North Carolina.

Oberlin College - Oberlin, Ohio.

State of Ohio, Department of Health - 450 E. Town St., Columbus, Ohio 43215.

Ohio State University - Columbus, Ohio 43210.

University of Oklahoma, Medical Center - 800 N. E. 13th St., Oklahoma City, Oklahoma 73104.

University of Oregon - Eugene, Oregon.

Oregon State University - Corvallis, Oregon.

University of Pennsylvania - Philadelphia, Pennsylvania 19104.

University of Pittsburg - Pittsburg, Pennsylvania 15213.

Planned Parenthood Center - 618 S. Crouse Ave., Syracuse, New York 13210.

University of Puerto Rico - Rio Piedras, Puerto Rico.

University of Puerto Rico, School of Medicine - San Juan, Puerto Rico.

Purdue University - Lafayette, Indiana 47907.

Regional Planning Council - 803 State Office Building, 301 W. Preston St., Baltimore Maryland 21201.

Regional Science Research Institute, Berkeley Office - 2440 Bancroft Way, Berkeley, California 94704.

Rensselaer Polytechnic Institute - Troy, New York.

University of Rochester - Rochester, New York 14627.

Rutgers - The State University - New Brunswick, New Jersey 08903.

San Diego State College - San Diego, California 92115.

University of South Carolina - Columbia, South Carolina.

Stanford Research Institute - 820 Mission St., South Pasadena, California 91031.

Syracuse University - Syracuse, New York 13210.

Tennessee Valley Authority - Knoxville, Tennessee.

University of Texas - Austin, Texas 78712.

The Twentieth Century Fund - 41 E. 70th St., New York, New York 10021.

United Planning Organization - 2000 P St., N. W., Washington, D. C.

Advisory Commission on Intergovernmental Relations - 1701 Pennsylvania Ave.,
N. W., Washington, D. C. 20575.

U. S. Department of Commerce - Office of Business Economics, Washington, D. C.

U. S. Department of the Interior, Geological Survey, Water Resources Division -
Menlo Park, California.

U. S. Department of the Interior, Geological Survey, Water Resources Division -
Mineola, Long Island, New York.

U. S. Department of the Interior, Geological Survey, Water Resources Division -
Tacoma, Washington.

Urban Land Institute - Ring Building, 1200 16th St., N. W., Washington, D. C.
20036.

Veterans Administration Hospital - Sepulveda, California.

University of Virginia - Charlottesville, Virginia.

Washington University - St. Louis, Missouri 63130.

West Virginia University - Morgantown, West Virginia.

University of Wisconsin - Madison, Wisconsin 53706.

University of Wisconsin, Department of Health, Education, and Welfare -
Milwaukee, Wisconsin 53211.

CANADA

University of Calgary - Calgary, Alberta.

Carleton University - Ottawa, Ontario.

Dalhousie University - Halifax, Nova Scotia.

Laval University - Quebec, Quebec.

University of Montreal - Montreal, Quebec.

Saint Paul University - Montreal, Quebec.

University of Toronto - Toronto, Ontario.

University of Victoria - Victoria, British Columbia.

University of Western Ontario - London, Ontario.

AVAILABLE BACK ISSUES OF RESEARCH DIGEST

A few copies of the back issues below are still available. Issues through Vol. 10, No. 1 may be purchased at \$1.00 per copy. Beginning with Vol. 10, No. 2 the price is \$2.00 to individuals and \$3.00 to organizations.

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| Vol. 8 | No. 2 | November, 1961 |
| Vol. 9 | No. 1 | April, 1962 |
| Vol. 10 | No. 1 | April, 1963 |
| Vol. 12 | No. 2 | Fall, 1965 |
| Vol. 13 | No. 1 | Spring and Summer, 1966 |

A few copies of the Indexes to Volume 9, Volume 10, Volume 11 and Volume 12 are also available at \$1.00 each.

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Research Digest

Volume 14

Number 1

Spring and Summer, 1967

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EDUCATION & RESEARCH

Bureau of Community Planning · University of Illinois

UNIVERSITY OF ILLINOIS

BUREAU OF COMMUNITY PLANNING

Director: Joseph M. Heikoff

RESEARCH DIGEST

Editor: Scott Keyes

Secretary: Marjorie Moluf

Associate Editor: Joyce Sozen

University Advisory Committee:

Co-Chairmen: Eric C. Freund and Willard B. Hansen. Members: Ven Te Chow, Ellis Danner, Jerome D. Fellmann, Hugh O. Nourse, Earl R. Swanson and Mary A. Vance.

Editorial Board:

Hans Blumenfeld, Donald J. Bogue, Henry Cohen, Donald L. Foley, Richard L. Meier and William L. C. Wheaton.

Editorial Notes

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Meanwhile, I wish to express my deep appreciation to Joyce Sozen and Eric Freund for their fine work in preparing this and the preceding issue during my absence from the office. (SK)

Founded in 1954 by an informal organization known as the Urban Planning Research Group, the Research Digest is prepared and distributed semi-annually by the Bureau of Community Planning of the University of Illinois. Its objective is to serve as a medium of communication among individuals and groups engaged in urban and regional research. Abstracts are invited covering research projects recently initiated, projects well underway on which significant progress or findings can be reported, and projects recently completed. Brief notes on items of interest to researchers in this field are also desired, as are special articles in keeping with the character of the publication. Subscription is \$4.00 per year for individuals and \$6.00 for organizations. Address all communications to Research Digest, Bureau of Community Planning, University of Illinois, 1202 West California Avenue, Urbana, Illinois 61801.

R e s e a r c h D i g e s t

Volume 14

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Bureau of Community Planning · University of Illinois

UNIVERSITY OF ILLINOIS

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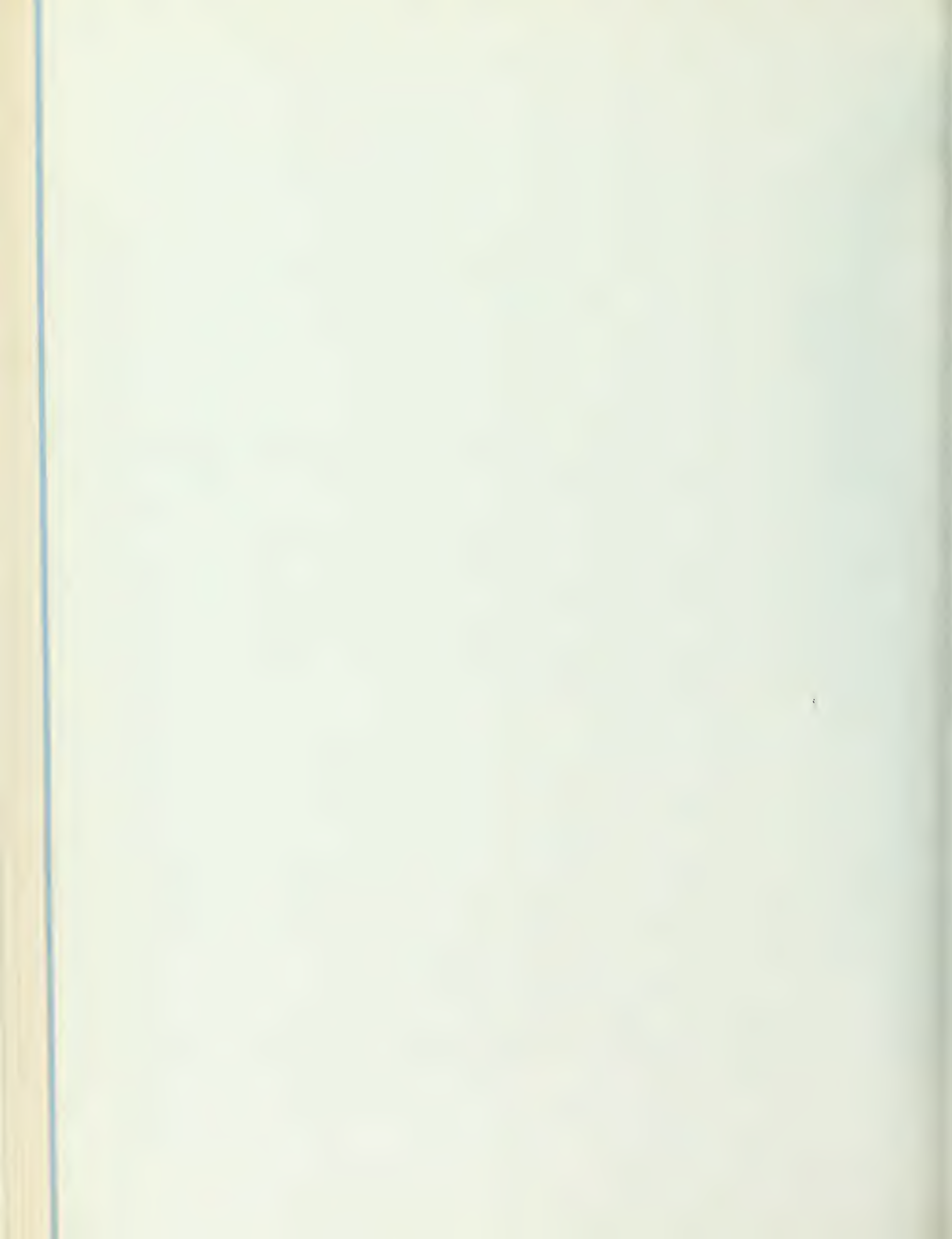
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UNITED STATES

1. METHODS FOR REDUCING WATER POLLUTION FROM STORM SEWER AND COMBINATION DISCHARGES THROUGH DEFINED PUBLIC WORKS PRACTICES

Main Investigators: Robert D. Bugher and Richard H. Sullivan.

Status of Research and Publications: In process.

Agency: American Public Works Association, under sponsorship of U. S. Department of the Interior, Federal Water Pollution Control Administration.

Previous Digest Report: None.

Research Problem. Pollution of storm water in urban areas is a result of contact with features which can be controlled to some degree by man. This study is designed to identify the relative importance of features which may contribute to the pollution such as litter, air pollution, chemicals used for control of ice and snow, and pesticides. In addition, operation and maintenance practices for combined sewer systems will be investigated to determine means of reducing pollution from overflow. (RHS)

2. CORRELATION OF GROUND SUBSIDENCE FEATURES, FOUNDATION FAILURES AND EARTH CRACKS WITH WATER TABLE DRAWDOWN IN ALLUVIAL BASINS

Main Investigators: Willard C. Lacy, Larry Edwards, and Frank Anderson.

Status of Research and Publications: A five-year project in process.

Agency: University of Arizona, College of Mines.

Previous Digest Report: None.

Research Problem. In this study, the investigators anticipate that it may be possible to predict zones of differential ground settlement and the magnitude to be expected. Thus, urban zoning and building codes can be adjusted in accordance with the problems that are developing.

Method of Study. Patterns of the areas of foundation failures in the Tucson area have been mapped, and features indicative of ancient earth cracks have been defined. Data concerning the nature of alluvial fill is being compiled from drillers' logs, foundation excavations, and surface exposures. Undisturbed samples are being tested to determine their engineering properties. Geophysical work conducted by the Department of Geology supplements this study. (WCL)

3./ DEVELOPMENT MODEL: NEIGHBORHOOD, COMMUNITY, AND TOWN

Main Investigators: Herbert P. Bangs, Jr., J. T. Fagan, J. G. Hoswell, and Fredric A. Ritter.

Status of Research and Publications: In process. Preliminary outline expected in late 1967.

Agency: Baltimore County, Maryland, Office of Planning and Zoning, Project Planning Division.

Previous Digest Report: None.

Research Problem. To construct a graphic, verbal, and mathematical model which will be used as a guide in making policy decisions affecting public and private development proposals.

Hypothesis. A hierarchial arrangement of various urban functions can be recognized within existing suburban development. It is possible, therefore, to isolate the levels of each hierarchial system and through modification adapt them to a model which will provide a means of guiding public facilities and private development into a rationally structured hierarchy of spaces and functions.

Method of Study. (1) Determine an optimum threshold population for each level of each functional hierarchy; (2) correlate these threshold populations in terms of a single hierarchy; (3) graphically and mathematically define spatial relationships for each level; (4) determine spatial allocation of density within each level; (5) compare and contrast for purposes of possible modification other approaches to a hierarchial arrangement as to their functional performance, political and economic feasibility, social and psychological desirability; (6) test final decisions in terms of various policy combinations and conditions; (7) provide feedback--update model as modifications and revisions to inputs are introduced. (HPB)

4. TRENDS IN EDUCATION AND THEIR EFFECT ON INTERIOR DESIGN OF SCHOOLS

Main Investigators: R. B. Guy and J. R. Hagely.

Status of Research and Publications: In process.

Agency: Battelle Memorial Institute, under sponsorship of E. F. Hauserman Company

Previous Digest Report: None.

Research Problem. To determine trends in educational programs at all levels of education and to relate the probable effects of these trends on interior design of new schools.

Method of Study. The project is being conducted in five major metropolitan areas. It includes an investigation of both public and private schools. (HR)

5. THE INFLUENCE OF ENVIRONMENTAL FACTORS ON LUNG MORPHOLOGY

Main Investigators: Daniel E. Jenkins, S. Donald Greenberg, Robert M. O'Neal, Samuel F. Boushy, and Royal E. Collins.

Status of Research and Publications: In process. Publications thus far have dealt largely with correlations of physiologic and morphologic parameters, descriptions of normal groups and regression equations for the physiologic screening studies and mathematical analysis of the mechanical factors involved in the screening methods used.

Agency: Baylor University, College of Medicine, under sponsorship of U. S. Department of Health, Education, and Welfare, Public Health Service.

Previous Digest Report: None.

Research Problem. Study chronic respiratory disease from its early to its late and terminal stages with emphasis upon physiologic findings and correlation of the various categories of physiologic derangement with the morphology, and the influence of environmental factors on this morphology.

Method of Study. Screening surveys for respiratory disease are being conducted on a community and special population basis using various pulmonary function screening tests for the detection of obstructive ventilatory disease and chronic bronchitis. Patients with severe pulmonary disease and pulmonary insufficiency are followed closely with a battery of tests and a prospective type of follow-up. When lungs are available, either through surgery or necropsy, they are inflated and fixed, the various morphologic criteria for the presence of emphysema, chronic bronchitis, and other types of pathology are identified and quantitated. Chemical quantitative studies on specific air pollutants are planned in conjunction with studies conducted at the Southwest Research Institute of Houston. Community air pollution surveys in terms of the health effects on various population groups are also planned. (DEJ)

6. POPULATION RESEARCH LABORATORY

Main Investigators: Sidney Goldstein, Harold N. Organic, and Alex M. Burgess, Jr.

Status of Research and Publications: In process. A seven-year project commenced July 1, 1966. The first year was devoted to organization and design.

Agency: Brown University, Department of Sociology and Anthropology, Population Studies and Training Center, under sponsorship of U. S. Department of Health, Education, and Welfare, Public Health Service, Division of Community Health Services.

Previous Digest Report: None.

Research Problem. (1) To establish at Brown University a research facility to conduct studies of and maintain surveillance over, the population of the State of Rhode Island in terms of its health and medical consumption on the one hand, and its community and socio-demographic structure on the other; and (2) to undertake methodological experiments designed to perfect feasible, reliable, and economic means to study and maintain the surveillance mentioned above.

Method of Study. Surveillance will be accomplished by means of (1) public and institutional records; and (2) five successive annual sample surveys of 1,250 to 1,500 households (containing 4,000 to 4,900 persons) each year, together with monthly contacts with each household for a year following initial interview. Thus, initial cross-sectional benchmark data and longitudinal follow-up data can be combined for study of change in medical behavior on the one hand, and demographic and community structure on the other, as well as for analysis of their interrelations. The facility will be available for collaborative research with qualified persons from institutions other than Brown, e.g., public health agencies, hospitals, and universities. Methodological experiments will include: (1) Comparative analysis of alternate modes of follow-up contacts. Each annual sample will be divided into four experimental groups, each to be followed in monthly contacts for a year by a single mode: telephone, mail questionnaire, diary, or re-interview. The relative merits of the experimental modes will be evaluated from the points of view of reliability in yielding selected types of data, appropriateness for various socio-economic segments of the population, and cost. (2) Creating and maintaining a simulated continuous population register over periods extending beyond the first year after initial contact. Surveillance and study will be continued beyond the first year at less frequent intervals (quarterly or semi-annually) to assay continued change in health and socio-economic characteristics, in some instances directly by modes discussed above, and in others indirectly by mail and record checks. By these means a cumulative continuous population register of 6,250 to 7,500 households (20,000 to 25,000 persons) will be generated and will serve as an integrated research resource. (HNO)

7. DECISION MAKERS AND POLITICAL INTEGRATION IN METROPOLITAN AREAS

Main Investigators: Willis Hawley and Stanley Scott.

Status of Research and Publications: In process. Completion scheduled for mid-1969.

Agency: University of California (Berkeley), Institute of Governmental Studies.

Previous Digest Report: None.

Research Problem. To investigate the character of the decision making process in metropolitan regions. To study the influence of individual leaders in effecting change and determine the character of the barriers to change, especially change which involves various forms of political integration.

Method of Study. Using the San Francisco Bay Area as a case study and within the context of a general theoretical framework, comprehensive interviews of key participants in the decision making process, and those to whom they attribute influence, are being conducted. Re-interviews of these persons and others during the three year course of the study are contemplated. A program of observation at meetings of key public and private groups concerned with metropolitan problems is being carried out, and an analysis of the social, economic, and political differences between communities in the region and the relation of these differences to patterns of regional cooperation is underway. (WH)

8. POLITICAL ECOLOGY AND THE CHARACTER AND SCOPE OF INTERGOVERNMENTAL RELATIONS AMONG LOCAL GOVERNMENTS

Main Investigators: Willis Hawley and Stanley Scott.

Status of Research and Publications: In process.

Agency: University of California (Berkeley), Institute of Governmental Studies.

Previous Digest Report: None.

Research Problem. To determine the nature and scope of formal and informal cooperation among local governments in the nine-county San Francisco Bay Area. To determine the relationship between different patterns of cooperation on the one hand, and the socio-economic characteristics, the history, and the professional and political leadership of cities and counties.

Method of Study. A questionnaire is being sent to city administrators and follow-up interviews are being scheduled. Social and political profiles of the communities in the region are being developed from census data, election statistics, and area newspapers. (WH)

9. PARTISANSHIP, INCUMBENCY, AND POLITICAL COMPETITION IN NON-PARTISAN ELECTIONS

Main Investigators: Willis Hawley and Stanley Scott.

Status of Research and Publications: In process. Publication scheduled for late 1967.

Agency: University of California (Berkeley), Institute of Governmental Studies.

Previous Digest Report: None

Research Problem. To determine those political and social circumstances in which non-partisan municipal elections work to the advantage of one or the other of the major political parties, and to determine the reasons why such advantage inheres.

Method of Study. Partisan elections are simulated in over 150 cities in California and the "outcome" of these elections are compared to the results of the actual non-partisan elections in these cities. The differences in sets of outcomes are related to the size, growth rate, and other socio-economic characteristics of each community, the electoral practices, and the political activity among partisan groups in these cities. (WH)

10. GOVERNMENT AND DECISION-MAKING IN THE SAN FRANCISCO BAY AREA

Main Investigators: Stanley Scott and Willis Hawley.

Status of Research and Publications: In process; preliminary report to be issued summer of 1968.

Agency: University of California (Berkeley), Institute of Governmental Studies.

Previous Digest Report: None.

Research Problem. To study the processes of regional decision-making as carried on by the Association of Bay Area Governments, San Francisco Bay Conservation and Development Commission, Bay Area Transportation Study Commission, Bay Delta Water Pollution Plan, the Joint Legislative Committee on Bay Area Regional Organization, and active citizens' groups.

Method of Study. This will be a capture-and-record study, observing the deliberations of the above-mentioned groups as they move toward decision on new physical and organizational plans for the Bay Area. Findings of related studies being conducted by the investigators and reported above will be incorporated. (SS)

11. THE POLICE FUNCTION IN THE SAN FRANCISCO-OAKLAND BAY AREA: INCONGRUENT PATTERNS OF POLICE ADMINISTRATION AND PRACTICE IN THE METROPOLITAN COMPLEX

Main Investigators: Joseph D. Lohman and Gordon E. Misner.

Status of Research and Publications: In process. Completion scheduled for fall of 1967.

Agency: University of California (Berkeley), Institute of Governmental Studies and School of Criminology.

Previous Digest Report: None.

Research Problem. Collection and analysis of the current organization pattern of police resources in the metropolitan area. Analysis will illustrate the current pattern of allocation of police resources to various sub-functions: patrol, investigation, juvenile problems, crime prevention, as well as administration, planning and research, and police-community relations and staff services such as information processing and communications. The second part of the study will deal with what this pattern of current organization implies as far as incongruities, dysfunctions, and the ability to relate strategically to the police problems currently manifesting themselves in the region are concerned.

Method of Study. Standard library research techniques as well as questionnaires will be used to secure the data. (GEM)

12. THE POLITICS OF FAIR HOUSING LEGISLATION: STATE AND LOCAL CASE STUDIES

Main Investigators: Thomas W. Casstevens and Lynn W. Eley.

Status of Research and Publications: To be published in 1967 by Chandler Publishing Company.

Agency: University of California (Berkeley), Institute of Governmental Studies.

Previous Digest Report: None.

Research Problem. A series of case studies on housing, race and local politics. It will include a chapter on the Berkeley fair housing battle and the Rumford Act Initiative controversy in California. (BJH)

13. FLUORIDATION IN CALIFORNIA: AN UNRESOLVED PUBLIC POLICY ISSUE

Main Investigators: Harriet Nathan and Stanley Scott.

Status of Research and Publications: Completed and published as Public Affairs Report, Vol. 7, No. 5, October, 1966.

Agency: University of California (Berkeley), Institute of Governmental Studies.

Previous Digest Report: 13:1-28.

Research Problem. Review the advantages of fluoridation, the evidence of safety in its use, its effect on dental caries, the alternatives to provision in water supplies, and the legal basis for fluoridation. The current status of controlled fluoridation throughout the United States is explored and the relative lack of its use in California. The rejection of fluoridation by the voters in California is analyzed and a number of recommendations are made to hasten the adoption of water fluoridation in California. (BJH)

14. PLANNING IN MAJOR METROPOLITAN AREAS

Main Investigators: Stanley Scott and others.

Status of Research and Publications: Publication scheduled for 1968-1969.

Agency: University of California (Berkeley), Institute of Governmental Studies.

Previous Digest Reports: 12:1-25; 13:1-40.

Research Problem. Comparative studies of planning and urban growth in six domestic and sixteen foreign metropolitan regions. Since the last Digest report, the following changes have been made. Stockholm region - David Pass, Royal Institute of Technology, has been added. The Israeli study is definite with Daniel Elazar, Temple University and Ernest Stock, Brandeis University, Overseas Program, Jerusalem as authors. The Dade County, Florida study has been eliminated. (BJH)

15. PROPERTY TAX EXEMPTIONS FOR SENIOR CITIZENS

Main Investigator: Margaret Greenfield.

Status of Research and Publications: Completed and published December, 1966.

Agency: University of California (Berkeley), Institute of Governmental Studies

Previous Digest Report: 13:1-29.

Research Problem. To study the problem of property taxation as it affects low-income households, particularly those headed by persons 65 years of age or over, and to evaluate the different proposals for change. (MG)

16. COMPARATIVE RESEARCH ON DELINQUENCY

Main Investigators: George A. DeVos and Hiroshi Wagatsuma.

Status of Research and Publications: In process.

Agency: University of California (Berkeley), Institute of Human Development, under sponsorship of U. S. Department of Health, Education, and Welfare Public Health Service.

Previous Digest Report: None.

Research Problem. An anthropologically and psychologically oriented investigation into the structure and function of social deviancy in Japan as a means of arriving at formulations concerning the genesis of social deviancy in society generally. Specific attention is directed toward delinquency formation in youth.

Method of Study. The research uses primary empirical data and evaluation of previous research. The present phase of the project is concerned with family unit studies of comparative samples of lower class urban families. A limited number of family units, including youths thirteen to fifteen years of age who are defined as conformist or deviant within the Japanese social context, are being studied intensively. A comparison of the effects of minority group status on the nature of incidence of delinquent behavior of minority group members in Japan is being completed. Functional analogies concerning the effects of social discrimination on minority group youth in Japan and the United States are being stressed. (GAD)

17. DEMOGRAPHIC AND SOCIAL AREA INDICATORS, TOOLS FOR EDUCATIONAL STUDIES

Main Investigators: C. Wayne Gordon, Robert Wenkert, and Audrey J. Schwartz.

Status of Research and Publications: In process.

Agency: University of California (Los Angeles), Department of Education, under sponsorship of U. S. Department of Health, Education, and Welfare, Office of Education.

Previous Digest Report: None.

Research Problem. The need for the development of the Center for the Evaluation of Education Programs at the University of California, Los Angeles, includes tools to deal with the rather complicated connection among the social and cultural conditions of the community found in demographic indicators, the indicators of school climates, and either or both as an important source of variation of certain educational effects. A project will be undertaken to organize census and other community data by school attendance units for the use of classifying schools using social and economic variables. Such indicators are needed for sampling estimates, predictor variables, and control purposes. Methods will also be developed for establishing indicators for school units not in metropolitan census districts. This project will go beyond the collation of raw data and seek to establish an efficient set of indicators of community environment. It should meet a recurring demand for tools for classifying school-community environments. The project will result in a bank of systematized data on cards, computer tapes, and print-out lists which will have general use. (CWG)

18. EXPANSION OF THE LOS ANGELES RIOT STUDY

Main Investigator: Nathan Cohen.

Status of Research and Publications: In process.

Agency: University of California (Los Angeles), Institute of Government and Public Affairs, under sponsorship of U. S. Office of Economic Opportunity.

Previous Digest Report: For related research, see 12:2-16.

Research Problem. The inquiry into the events of the Los Angeles riot of August, 1965 in Watts and surrounding communities has been broadened to include both the enclave of the Mexican-American (Spanish surname) population living in the riot area and the Mexican-American communities of East Los Angeles.

Previous Relevant Research. Richard T. Morris and Vincent Jeffries, The White Reaction Study, MR-84, 116 pp. \$4.00 per copy. Jerome Cohen, A Descriptive Study of the Availability and Useability of Social Services in the South Central Area of Los Angeles, MR-85, 48 pp. \$3.00 per copy. Eugene L. Loren, Economic Background - The Los Angeles Riot Study, MR-86, 48 pp. \$3.00 per copy. All three publications available June 1, 1967 from Institute of Government and Public Affairs, University of California, Los Angeles.

Method of Study. The Mexican-American enclaves in the Watts riot area are being analyzed along with the data collected on Negro area residents. The East Los Angeles data is being analyzed for comparative purposes. (WZH)

19. SURVEY OF HALLUCINOGENIC DRUG USE

Main Investigators: Nathan Cohen and William McGlothlin.

Status of Research and Publications: In process.

Agency: University of California (Los Angeles), Institute of Government and Public Affairs, under sponsorship of U. S. Public Health School.

Previous Digest Report: None

Research Problem. To explore and determine why reasonably mature and well-educated persons are attracted to hallucinogenic drugs; how, and for what reason, the drugs are used; and what the net consequences are after a number of years. An understanding of the rapidly growing nonmedical use of LSD and other strong hallucinogens is especially important because segments of the population which are not otherwise socially deviant account for much of the hallucinogenic use.

Previous Relevant Research. William H. McGlothlin, Sidney Cohen, and Marcella S. McGlothlin, Long-Lasting Effects of LSD on Normals, MR-75. Paper presented at the Fifth Annual Meeting of the American College of Neuropharmacology, San Juan, Puerto Rico, December, 1966, 24 pp. Also, William H. McGlothlin, Toward a Rational View of Hallucinogenic Drugs, MR-83, August, 1966, 18 pp. Both publications available from the Institute of Government and Public Affairs, University of California, Los Angeles. Both are \$2.00 per copy. (WZH)

20. REGIONAL INFORMATION SYSTEMS

Main Investigators: Werner Z. Hirsch and Sidney Sonenblum.

Status of Research and Publications: Initiated in 1965, completion scheduled for 1968.

Agency: University of California (Los Angeles), Institute of Government and Public Affairs, under sponsorship of Resources for the Future.

Previous Digest Report: 12:1-27.

Research Problem. Recognizing the need for better information to assist state government officials in making far-reaching decisions, the Institute has been working on the design of a regional information system for the last three years. The system places a special emphasis on information needed for decisions related to water, recreation, transportation, education, and development.

In conjunction with this effort, a partial program budget for the State of California was designed and implemented for one fiscal year and powerful methodologies were developed to project California's employment figures (by different industries, population, and personal income) to 1975. (WZH)

21. RESIDENTIAL ORIGINS, MIGRATION, AND OCCUPATIONAL MOBILITY OF MEXICAN-AMERICANS IN LOS ANGELES

Main Investigators: Leo G. Reeder and Gene Mickey.

Status of Research and Publications: Data are now being analyzed. One and possibly two manuscripts are scheduled.

Agency: University of California (Los Angeles), School of Public Health.

Previous Digest Report: None.

Research Problem. An investigation into the residential origins, migration patterns, occupational mobility, and fertility and mortality of Mexican-American women in Los Angeles

Method of Study. A random probability sample of 1,000 women were interviewed. A structured interview instrument was used. (LGR)

22. A CYTOLOGIC STUDY OF AIR POLLUTION EFFECTS

Main Investigators: Seymour M. Farber and Samuel L. Pharr.

Status of Research and Publications: In process.

Agency: University of California (San Francisco) Medical Center, School of Medicine, under sponsorship of U. S. Department of Health, Education, and Welfare, Public Health Service.

Previous Digest Report: None.

Research Problem. A large scale sputum cytologic survey in progress among workers in selected occupations aims to determine the possible effects upon bronchial epithelial cells of occupational inhalation exposures to a variety of dusts, fumes, and vapors. Particular interest is directed toward study of large groups of individuals whose occupation subjects them to inhalation exposures of selected materials which exceeds that of the general population.

Method of Study. More than 8,000 sputum specimens have been collected and include samples from welders, sandblasters, traffic police, municipal bus drivers, uranium miners, men engaged in production of paint, petroleum products, general chemicals, radioactive materials, as well as many other exposure groups of potential interest. Control reference groups include long term inmates of a rural prison, Trappist monks, and a representative patient group with a variety of chest diseases. All smears are redistributed by random selection and identified by code numbers to provide complete anonymity at the time of microscopic examination. The cytologic examination is a highly detailed one in which precise qualitative and quantitative evaluations of morphological characteristics of sputum cellular content are recorded for 51 items of information. Computer analysis has been programmed to assist in evaluating the possible relationship between alterations in cellular morphology and occupational inhalation exposure, length of employment, previous occupations, and smoking status. (SMF)

23. STANDARD METROPOLITAN AREA CLASSIFICATION

Main Investigator: Brian J. L. Berry.

Status of Research and Publications: Completed April, 1967. Materials available from U. S. Bureau of the Census.

Agency: University of Chicago, Center for Urban Studies, under sponsorship of Social Science Research Council, Committee on Areas for Economic and Social Statistics, supported by U. S. Bureau of the Census.

Previous Digest Report: 13:1-67.

Research Problem. To re-evaluate the metropolitan area concept used in current census practice.

Major Findings. Based upon detailed analysis of small-area commuting data for 1960, on a comparable national basis, labor markets of every major urban center were defined and mapped, and the country was divided into a near-exhaustive set of functional economic areas based upon daily commuting behavior of the population. Only national parks, deserts, etc., lay outside these zones of daily influence--the entire population of the country is essentially "metropolitanized." Where significant cross-commuting exists, consolidated urban regions were defined. The results are presented in a set of four maps. In addition, five background papers and a brief final report are available. (BJLB)

24. SOCIAL AND ECONOMIC DATA REQUIREMENTS FOR COMPREHENSIVE URBAN RENEWAL PROGRAMMING AND PLANNING

Main Investigators: Joyce Whitley and Patricia Peery.

Status of Research and Publications: Completed. Principal findings presented in a draft document, "An Approach to an Interrelated Comprehensive Planning Methodology," available from Center for Urban Studies, University of Chicago, 5852 University Avenue, Chicago, Illinois 60637.

Agency: University of Chicago, Center for Urban Studies, for the Chicago Community Renewal Program, Department of Development and Planning, City of Chicago.

Previous Digest Report: None.

Research Problem. To assist state and local public agencies undertaking comprehensive planning programs and community renewal programs, as well as other activities assisted by the U. S. Department of Housing and Urban Development programs, this study was conducted to: (1) set forth methods for identifying social and economic considerations and policies relating to urban social problems; (2) identify and evaluate prevailing uses of social and economic data in CRP and metropolitan planning programs, data sources and methods of analysis, and to recommend relevant social and economic data, factors, and methods of analysis.

Method of Study. Development of a conceptual approach and framework for integrating social and economic considerations and traditional urban planning process, based upon: (1) review and evaluation of theoretical and empirical studies in the relevant fields with the objective of identifying the pertinent social and economic considerations and urban processes; (2) review of the actual and theoretical work in planning with the objective of clarifying basic concepts, assumptions, and hypotheses.

Major Findings. In order for comprehensive urban planning to be rational, effective, and to take into account relevant social and economic factors in the urban milieu, goals, means, and programs must be formulated and implemented in an interrelated, theoretically based framework. In addition, goals, means, and programs must be designed for specific social-spatial groups within the larger planning area. (JM)

25. MID-CHICAGO ECONOMIC DEVELOPMENT STUDY

Main Investigators: Paul N. Zimmerer, Richard B. Ross, and Donald I. Kane.

Status of Research and Publications: Completed. Published and available from The Mayor's Committee for Economic and Cultural Development (Chicago), Chicago Civic Center, Room 302, Chicago, Illinois 60602.

Agency: Mayor's Committee for Economic and Cultural Development (Chicago), with the assistance of the University of Chicago, Center for Urban Studies.

Previous Digest Report: None.

Research Problem. Development of policy variables, policies, and programs which relate to urban economic development. The Mid-Chicago Area has had persistently high rates of unemployment and has exhibited difficulty in retaining or attracting industry. A major portion of the City's sub-standard housing lies in this area. Racial groups remain substantially segregated with respect to residency. The study area contains approximately one-fourth of the City's area and about one million people.

Method of Study. The study area is broken down into three geographic sub-areas. Long-and short-run policies and programs are developed for the Mid-Chicago Area as a whole, and also for each of the defined sub-areas. Data for the study include locations and distribution of Chicago's industries, types of industries, industrial obsolescence, industrial movements, zoning, employment, traffic, transportation, land use, population, and income.

Major Findings. The Mid-Chicago Area lost 270 companies and 70,000 jobs from 1950 to 1964. Reinvestment in commercial, industrial, and residential property was minimal during this 14-year period. Intensive analysis of the data clarifies the kinds of programs necessary to redevelop the Mid-Chicago Area. Public and private programs are set forth for the entire area and the sub-areas. The programs and strategies are directed toward action. (DIK)

26. IMPLEMENTATION OF ACTION PROGRAMMING FOR THE MID-CHICAGO STUDY AREA

Main Investigators: Paul N. Zimmerer, Donald I. Kane, Richard B. Ross, David C. Caplan, James H. Wolf, Joby Berman, Daniel N. Parker, and Michael J. Stoken.

Status of Research and Publications: In process. This study is related to the Mid-Chicago Economic Development Study, Item 25, above.

Agency: Mayor's Committee for Economic and Cultural Development (Chicago).

Previous Digest Report: None.

Research Problem. To determine the economic development programs needed in small sectors of the Mid-Chicago study area, and to implement these programs.

Hypotheses. Each small area or zone has well defined problems that can be resolved through programming. Once the entire Mid-Chicago Area has been studied, evaluated, and programmed on a zone basis, long-range programs for the area will be implemented.

Method of Study. Zones in the Mid-Chicago Area will be studied with emphasis on employment and industrial development. Each study zone will be the equivalent of about one square mile in area. The order of study will be determined by the employment and industrial dynamics history of the respective zones. Area problems and their causes will be ascertained through the use of an industrial questionnaire. Selected programs will be developed for each zone based on an analysis of the findings of the questionnaires. (DIK)

27. AN ECONOMIC MODEL--EVALUATION OF PUBLIC COSTS, BENEFITS, AND PROGRAMMING STRATEGIES FOR LOW INCOME COMMUNITIES

Main Investigators: Paul N. Zimmerer, Donald I. Kane, David C. Caplan, Joby H. Berman, and James H. Wolf.

Status of Research and Publications: In process.

Agency: Mayor's Committee for Economic and Cultural Development (Chicago).

Previous Digest Report: None.

Research Problem. To develop an economic model that will evaluate programs designed to raise the mean income level and change the income profile of low income communities through public expenditure investments. Evaluation will be made through the development of strategies related to maximum and minimum returns for each public dollar spent. The model will be structured to predict: (1) changes in income, (2) changes in expenditure patterns, and (3) the resulting social changes, i.e., living conditions, crime rate, and education levels.

Hypotheses. In any income group, certain families will show high increases in income relative to small public investment expenditures and other families will show low increases in income. Conceptually, investments in the former yield maximum returns and permit articulation of a maximizing strategy and conversely, investments in the latter result in a minimizing strategy. The area of all workable programs relating income to public expenditure investment lies between these maximum and minimum strategies.

Method of Study. The cost experience of manpower training institutions will be applied to the community being studied. This cost experience and the resultant increases in income will be utilized to develop maximum and minimum strategies. Possible programs and their costs will be analyzed from the above findings. Aggregate changes in expenditure patterns will be predicted through empirical expenditure data. (DIK)

28. PLANNING AND SPONTANEITY IN THE IMPLANTATION OF BRASILIA

Main Investigator: David G. Epstein.

Status of Research and Publications: Field work to be completed January, 1968. Results to be written up immediately following termination of field work.

Agency: Columbia University, Department of Anthropology, in cooperation with Centro Latinoamericano des Pesquisas em Ciencias Sociais (Latin American Social Science Research Center), under sponsorship of Foreign Area Fellowship Program, Rio de Janeiro.

Research Problem. (1) Brasilia is Brazil's new planned capital in the interior. The influence of planning and technical administration has been far greater than in most Brazilian cities, as evidenced by the importance given to Lucio Costa's city plan in the formation of public policy, and by the lack of elected governmental bodies. Nevertheless, in ten years many deviations from the original plan have become evident, notably the growth of squatter settlements which the planners had hoped to prevent. The research will examine the nature and causes of this disparity between planned and spontaneous developments. (2) All the localities in Brasilia, with minor exceptions, are less than ten years old. Since their populations have disparate origins, the study will examine the means by which the social bonds typical of Brazilian communities--extended family ties and informal vertical alliances--are established or substituted for. (3) Virtually without industry, Brasilia is a pure case of urbanization without industrialization. The study will compare the urbanization of Brasilia with urbanization in cities where some industrialization is taking place. The comparison will include both ecological and acculturative phenomena.

Method of Study. Data on all the major urban localities in the Federal District (including their settlement and growth), have been gathered, classified, and filed. The localities have been classified according to four broad types: (1) Encampments - legally recognized temporary quarters built and administered by private or public companies. (2) Pilot Plan - the area encompassed by Lucio Costa's plan, including the "superblocks" of apartment houses. Largely confined to the middle and professional classes, this area has a population of about 80,000. (3) Satellite Towns - several recognized settlements from seven to forty kilometers outside the Pilot Plan, housing lower and lower-middle strata. The satellite towns are planned or in the process of having plans made for them; public services either function or are being installed for the population which numbers more than 150,000. (4) Invasions - illegal settlements, two of which are repositories for squatters formerly resident in other areas, especially the Pilot Plan, and removed by the Prefecture. The invasions are virtually without administration or public services, and are almost entirely dominated by the lowest social stratum. The total population exceeds 50,000. (DGE)

29. EFFECTS OF CHANGES IN PROPERTY TAXES ON LAND REFORM IN CHILE

Main Investigator: Gerald Sazama.

Status of Research and Publications: Currently developing background information. Trip to Chile planned for June-September, 1967. Report to be written and submitted to a journal by March, 1968.

Agency: University of Connecticut, in cooperation with University of Wisconsin Land Tenure Center, Chilean Office, under sponsorship of Social Science Research Council.

Previous Digest Report: None.

Research Problem and Hypothesis. To test the following hypothesis: Reform of agricultural land taxes results in a significant increase in revenue from the agricultural sector and this sets into action important economic forces which work toward the achievement of the goals of land reform, i.e., a more efficient use of agricultural and a more equitable distribution of agricultural holdings. In the past few years, Chile has enacted a series of important land tax reforms. This reform is unique to Latin America and provides an excellent opportunity to obtain new light on a question long debated--whether increased land taxes will result in a more efficient use of agricultural land and a more equitable distribution of its ownership.

Method of Study. Conduct case studies of 25 to 50 properties. (GWS)

30. MICROORGANISMS INDUCING TASTES AND ODORS IN WATER

Main Investigator: Ralph P. Collins.

Status of Research and Publications: In process.

Agency: University of Connecticut, Department of Botany, under sponsorship of U. S. Department of the Interior, Federal Water Pollution Control Administration.

Previous Digest Report: None.

Research Problem. To study microorganisms causing tastes and odors in public water supplies. Investigations of the fatty acids produced by taste and odor microorganisms and the chemical identity of the earthy odor induced by actinomycetes are being conducted. (RPC)

31. RATE AND DIRECTION OF GROUND WATER CIRCULATION IN CLOSE SPACED GRAVEL WELLS UNDER THE INFLUENCE OF NON-SYNCHRONOUS PUMPING TIME AND RATES

Main Investigators: Larry Frankel and Hugo Thomas.

Status of Research and Publications: In process.

Agency: University of Connecticut, Department of Geology and Geography, under sponsorship of U. S. Department of the Interior, Office of Water Resources Research.

Previous Digest Report: None.

Research Problem. To obtain and analyze data which can aid in determining before home construction occurs, under what conditions (e.g., well depth, rate of pumping, distance of separation of water supply and sewage disposal) seemingly safe topographic and earth material situations can become areas of contaminant concentration. Storrs, Connecticut is an urban area without a central water supply or sewage disposal facilities. Individual wells and septic tanks are utilized. With the gradual transformation of the area over the past twenty-five years from a rural community, with separation of homes by many acres to an urban community with

separation by less than 150 feet in many cases, well contamination has become a problem. Contamination has occurred in many situations where the topography, percolation indices, and hydraulic gradient are favorable to "good" water when there is separation of water supply and sewage disposal in accordance with state regulations. It is therefore suspected that contamination is the result of changes in the rate and direction of groundwater flow as the result of nonsynchronous and variable rates of pumping from closely spaced wells.

Method of Study. To test this, well fields will be constructed and certain wells contaminated with nontoxic chemical and biological contaminants, and the rate and pattern of flow under natural conditions and pumping will be determined. (LF)

32. EMPLOYEE BENEFITS IN THE CONNECTICUT PUBLIC SERVICE

Main Investigator: Rosaline Levenson.

Status of Research and Publications: In process.

Agency: University of Connecticut, Institute of Public Service.

Previous Digest Report: None.

Research Problem. To survey fringe benefits offered to public employees in Connecticut towns and cities by the State of Connecticut and by the federal government, and compare these benefits with those of non-professional employees of Connecticut public schools. Fringe benefits to be surveyed include retirement plans, hospital and medical insurance, insuring training and educational opportunities, and leave schedules. Estimated costs of the benefits are also being studied.

Method of Study. The study is being undertaken by means of questionnaires sent to all government units and schools in the state. The appendix will include tables listing each employee benefit by town and city in comparison with the schools within the particular municipality. (RL)

33. THE MULTI-TOWN APPROACH TO LOCAL GOVERNMENT PROBLEMS IN CONNECTICUT

Main Investigators: Rosaline Levenson and G. Ross Stephens.

Status of Research and Publications: Report scheduled for publication in 1968 and to be available from Institute of Public Service, University of Connecticut. \$1.00 per copy.

Agency: University of Connecticut, Institute of Public Service.

Previous Digest Report: None.

Research Problem. To determine how problems of local government that are of a regional nature can best be handled in Connecticut.

Method of Study. Survey, describe, and analyze local problems in Connecticut requiring regional solutions, previous attempts at regionalization in the state, and current undertakings. Present efforts at regionalization in other parts of the country are also being studied.

Major Findings. Reapportionment and the availability of federal funds are forcing Connecticut towns and cities to alter their former attitudes of independence and isolation and to consider ways of joining together to solve common problems. However, the move for regionalization is proceeding along three lines in various sections of the state. Business and insurance interests in Hartford are supporting a move for metropolitan government in the Greater Hartford Area, while in the New Haven Area, groups are favoring special regional districts and authorities. A third force consists of those supporting action by the state as a stimulator of joint programs by contiguous towns and cities. Because of the strong party system in the state, which exists even in the smallest towns, the emergence of a metropolitan government as a political unit is doubtful in the foreseeable future. What is expected is an enlarged role of state agencies in guiding local activities and also the establishment of a state department of urban or municipal affairs to serve as a coordinator and clearing house for state and federally financed programs at the local level. At the same time, regional districts and authorities, on a functional basis, may be expected to increase. (RL)

34. LOCAL GOVERNMENT IN THE SIXTIES: THE VIEW FROM CONNECTICUT

Main Investigator: Rosaline Levenson.

Status of Research and Publications: Report scheduled for publication in late 1967 and to be available from Institute of Public Service, University of Connecticut. \$1.00 per copy.

Agency: University of Connecticut, Institute of Public Service

Previous Digest Report: None.

Research Problem. Study and analyze changes taking place in local governments in Connecticut and the direction they seem to be moving. The publication resulting from the study will also serve as a textbook for a non-credit class in local government conducted by the investigator for municipal women employees. The topics covered include: Local Government--Its Activities, Services, and Opportunities; Changing Community Social and Economic Patterns; Managing Local Government Operations; Local Government As Employer; Impact of a Technological Age; and the Federal-State-Local Partnership.

Major Findings. Because of the transformations now taking place in New England's social and economic life, Connecticut local governments are being forced to undergo changes. Some of the communities are in the vanguard of these changes; others are resisting because of historical traditions and political factors. However, change has an accelerating effect. With a reapportioned state legislature now responsive to urban needs, new experiments in local government are inevitable, and despite early resistance to these experiments, they probably will be responsible for the survival of local governments as viable instruments of governance. (RL)

35. ACTIONS OF THE 1967 GENERAL ASSEMBLY OF INTEREST TO CONNECTICUT TOWNS AND CITIES

Main Investigator: Rosaline Levenson.

Status of Research and Publications: Publication scheduled for winter of 1967 and to be available from Institute of Public Service, University of Connecticut. \$1.00 per copy.

Agency: University of Connecticut, Institute of Public Service.

Previous Digest Report: None.

Research Problem. Study the legislation affecting local governments passed by the biennial state legislature during its 1967 term.

Method of Study. Analyze the legislation enacted by the state legislature which is of concern to local governments, compare it with legislation of previous sessions, and note changes taking place as the result of reapportionment. A digest of major acts passed by the legislature of interest to towns and cities will be included.

Major Findings. Vital legislation affecting urban populations has been passed by the state legislature, as was to be expected of the reapportioned legislative body. However, some of this legislation was necessitated by the availability of federal funds, the Negro protest movements, and the general climate of reform in the nation. It is too early to pinpoint the exact effects of the reapportioned legislature other than the obvious responsiveness of the legislature to demands of urban interest groups. However, a shift in power blocs has resulted and mayors of large cities may be expected to wield a larger influence upon state legislators. (RL)

36. COMMUNICATION AND PUBLIC RELATIONS MANAGEMENT--A BEHAVIORAL SYSTEMS APPROACH FOR LOCAL GOVERNMENT ADMINISTRATORS

Main Investigator: George H. Murray.

Status of Research and Publications: In process.

Agency: University of Connecticut, Institute of Public Service.

Previous Digest Report: None.

Research Problem. The study has three broad foci. (1) The Concepts Stage. Conceptual ideas from many sources have been identified which make up the foundation of the study. Presently these concepts are: the concepts of process, systems, systems levels of analysis, planned change, government as communication, administration as communication, conflict resolution, institutionalization, and systems analysis (a conceptual tool). (2) The Analysis Stage. A critical analysis of the literature concerning organizational, community, and metropolitan/regional communication systems relevant to political behavior and administrative decision making. (3) The Design Stage. The development and design of multi-level communication system models relevant to broadly conceived goals of local government such as community development, citizen participation, political and intergovernmental integration, and governmental modernization.

With the information and know-how gained from the research, plans will be formulated to develop and carry out a continuing educational program for public administrators. (GHM)

37. / HOUSING IN RAPIDLY GROWING URBAN-RURAL FRINGE AREAS

Main Investigator: Glenn H. Beyer.

Status of Research and Publications: In process.

Agency: Cornell University, Agricultural Experiment Station, under sponsorship of U. S. Department of Agriculture, Cooperative State Experiment Station Service.

Previous Digest Report: None.

Research Problem. To establish basic criteria for sound design and planning of housing in urban-rural fringe areas.

Method of Study. A survey of the population of one or more urban-rural fringe areas will be undertaken. Emphasis will be on the determination of important socio-economic and socio-psychological factors in the impact of the settlement of urbanites in areas previously occupied primarily by farmers and village residents. (GHB)

38. PROGRAM PLANNING IN THE COMMUNITY

Main Investigator: William W. Reeder.

Status of Research and Publications: In process.

Agency: Cornell University, Agricultural Experiment Station, under sponsorship of U. S. Department of Agriculture, Cooperative State Experiment Station Service.

Previous Digest Report: None.

Research Problem. Develop and test a process that will be effective in determining community problems and needs and that simultaneously will stimulate interest in alleviating them; to simplify these processes so they can be used by community leaders without professional help.

Hypothesis. That a cognitive awareness of what the community has compared with what the community wants will tend to stimulate efforts to bring about planned change by the educational agencies in the community.

Method of Study. Work on an earlier phase of this project focused on the process of determining problems and needs in relation to community services. This phase of the project is centered on educational problems and needs. The study uses a sample of 592 members of a small central New York community. A few beliefs, attitudes, and behaviors are being studied in several aspects of the lives of the respondents, namely: as a citizen, an organization member, an employer or employee, a neighbor, a husband or wife, a father or mother,

and a church member. Information is also included on health, recreation, education, ethical standards, and morale and satisfaction. A series of scales and scores have been developed to measure the various factors. These are being refined and simplified for further use. Reports are being prepared on the different aspects of life in the community to be reported to the leaders in the various educational agencies in the community. (HR)

39. MATHEMATICAL MODELS OF HYDROLOGIC SYSTEMS

Main Investigators: James A. Liggett and David A. Woolhiser.

Status of Research and Publications: In process.

Agency: Cornell University, College of Engineering, under sponsorship of U. S. Department of the Interior, Office of Water Resources Research.

Previous Digest Report: None

Research Problem. The economic design of water resource systems, in particular systems which require the description of complete flow hydrographs for design purposes such as urban and rural storm drainage systems, river systems involving unsteady discharges from dams, hydro power plants, sewage outfalls, and estuaries. In each of these cases the water quality aspects may be very important. In general, a good description of water quality involves knowledge of quantities. A physically sound description of flow in channels or over surfaces is provided by shallow water theory. At present the equations of shallow water theory are of limited use to engineers because their solution is very complex. However, these equations can be solved on the digital computer; many of the solutions can be put in table or chart form for ready use. Thus calculations involving the unsteady flow of water with a free surface can be made accurate through use of exact physical analysis. (JAL)

40. USE OF GAMING-SIMULATION MODELS IN URBAN AND PLANNING THEORY

Main Investigator: Allan G. Feldt.

Status of Research and Publications: In process.

Agency: Cornell University, Department of City and Regional Planning, under sponsorship of Ford Foundation.

Previous Digest Report: None

Research Problem. The use of gaming-simulation models in the construction and teaching of urban theory and planning theory. A basic gaming-simulation model has been developed reflecting major features and systematic properties of urban growth processes. The models are intended primarily as teaching and communication devices and have proved to be highly effective in teaching concepts of urban and regional growth and in presenting existing theories of urban structure and process. Future models now under development concentrate on smaller units of urban structure incorporating elements of time allocation, monetary flows, personal satisfaction, community power, and spatial location in the development of a model reflecting an integrated theory of urban social behavior. Consideration and experimentation is also being undertaken to test the utility of models of this type as a laboratory instrument for considering the impact of administrative innovations on an analogue to an urban-regional system. (AGF)

41. FUTURE WATER SUPPLY FOR NEWARK, DELAWARE

Main Investigator: R. D. Varrin.

Status of Research and Publications: In process.

Agency: University of Delaware, Department of Geology, under sponsorship of Delaware Geological Survey.

Previous Digest Report: None.

Research Problem. To devise a program for the long-range development of Newark's water supply to assure Newark of having an adequate supply as the City expands. The economic feasibility of alternative solutions, e.g., ground versus surface water supply, will be considered. (RDV)

42. THE TROIKA: A HISTORY OF THE JOINT COMMUNITY IMPACT COORDINATION COMMITTEE

Main Investigator: Pauline E. Council.

Status of Research and Publications: Completed

Agency: Florida State University, Urban Research Center.

Previous Digest Report: None.

Research Problem. To study and document the contributions made to the planning process in the east central Florida region and Brevard County particularly by the Joint Community Impact Coordination Committee, a committee composed of representatives from the offices of the Governor of the State of Florida, the commanding officer of the Air Force, and the director of NASA.

Hypotheses. The JCICC was a far reaching, but not necessarily highly visible, organized effort to deal with the impact resulting from the space program in Brevard County and the five surrounding counties. The "impact" was essentially civilian in-migration which was dependent almost entirely on the local communities for services. The activities of the JCICC in dealing with the impact led to formation of the East Central Florida Regional Planning Council.

Method of Study. All available records of meetings and correspondence of the JCICC and its sub-committees in addition to the JCICC clippings file were studied. The personal records of the Governor's representative (now deceased) were reviewed for additional information. Two area newspapers were read for background material. About twenty interviews were conducted with individuals formerly associated with the JCICC or in important posts in order to learn their assessments

Major Findings. The JCICC provided effective coordination of the State of Florida, the U. S. Air Force, and NASA and assured cooperation and dissemination of accurate information needed by the "community" for planning to meet the impact. Other efforts were directed toward determining the scope of the impact in terms of geography, in-migration, and problems communities would face; forecasting the effect on living conditions in communities; marshalling resources to circumvent or alleviate problems; and planning for related economic and industrial development in the region. It was recognized that both the private

and public resources of the local community were inadequate to meet the problem which were perceived in terms of facilities such as housing and schools. The committee lacked authority but was successful in securing outside resources to assist the communities. However, the approach was fragmented--never coming to grips with the total needs of individuals and families. The aspect of inter-governmental cooperation which evolved was among agencies of governments rather than among units of government. The JCICC provided a means for the State, the Air Force, and NASA to cooperate. The JCICC executive office provided vital communications between the JCICC and the community. The formation and operation of the East Central Florida Regional Planning Council was supported by the JCICC but other groups were also important in fostering this concurrent development. (PEC)

43. WATER QUALITY CONTROL AS AN ECONOMIC PROBLEM

Main Investigator: Larry C. Ledebur.

Status of Research and Publications: A doctoral dissertation, completed.

Agency: Florida State University, Urban Research Center, under co-sponsorship of Resources for the Future, Inc.

Previous Digest Report: None.

Research Problem. Study water pollution in an economic context. It is basically an investigation of the concept of economic efficiency in systems in which technical external linkages exist between firms, municipalities, and the public, which are not mitigated through market mechanisms. Where these technical interdependencies do exist the market mechanism will not provide for economic efficiency. Some form of extra-market corrective action will be required if the water resource is to be allocated in a manner which will maximize the benefits which can be derived from it. But the form which this remedial action should assume is a complex matter both at the theoretical level and the level of applied social policy.

The problem is further complicated because it cannot be handled in terms of economics alone. It raises fundamental questions concerning social values and the priorities they are accorded in our social system. Values such as justice, equity, freedom, and economic efficiency cannot all be served in situations involving complex social interdependencies such as those resulting from water pollution. This, in turn, raises fundamental questions about the economist and his sensitivity to the social aims of the economy and society in which he operates.

Method of Study. Analysis of the social costs created by water pollution, the effectiveness of alternative remedial policies in eliminating these costs, and the data requirements for each approach; analysis of the effect of waste treatment alternatives on remedial decision making; investigation of additional complexities involved in devising an economically efficient system of water quality control when the water resource experiencing deterioration is a common pool, such as a lake, pond, estuary, or lagoon. A case study of Lake Apopka in Florida was conducted which examines the

plethora of difficulties encountered in empirical studies of the economic effects of water pollution and water quality control measures.

Data on the activities of micro-economic entities are very difficult and often impossible to obtain, particularly when the profitability of a firm is jeopardized through the threat of remedial action to enforce treatment of effluent discharge. (LCL)

44. SOUTH BREVARD UNIFICATION EDUCATION COMMITTEE: CITIZEN PARTICIPATION IN PLANNING

Main Investigator: Robert M. Griffin, Jr.

Status of Research and Publications: Investigation completed; publication pending.

Agency: Florida State University, Urban Research Center, under sponsorship of Ford Foundation.

Previous Digest Report: None.

Research Problem. Investigate and determine the activities of a private voluntary organization attempting to unify eleven municipalities in response to rapid urbanization in the Cape Kennedy area.

Method of Study. Participant observation supplemented by interviews of members of the committee and those non-members identified as influential in the affairs of the committee. Findings from research on community characteristics were also incorporated into the report.

Major Findings. Leadership was provided for the committee by a small group of members and non-members who differed from the rest of the committee in knowledge, probably greater experience in urban living, and residence in high amenity communities of the urban area. The strategy of the committee neutralized major opposition in the conduct of the study, but omitted significant representation from certain groups in the urban area. (RMG)

45. BREVARD COUNTY NEIGHBORHOODS

Main Investigator: Robert M. Griffin, Jr.

Status of Research and Publications: In process

Agency: Florida State University, Urban Research Center, with support from Ford Foundation

Previous Digest Report: None.

Research Problem. Study the urbanizing area of Brevard County (Cape Kennedy impact area) and evaluate its different sections in terms of "neighborhoodness." The degree of "neighborhoodness" defined in physical, associational, and activity terms accounts for major variations in satisfaction with the neighborhood, community, urban area, and urbanizing county. The importance of the neighborhood, however, depends upon the historical character of the urban nuclei to which these rapid growth neighborhoods are oriented.

Method of Study. Divide the area into approximately 70 neighborhoods, and evaluate these neighborhoods in terms of "neighborhoodness." Attitudes of residents of different classifications of neighborhoods will be compared with one another. (RMG)

46. ECONOMICS OF SMALL CITIES

Main Investigators: Zarko Bilbija, Robert M. Griffin, Jr., and Huey B. Long.

Status of Research and Publications: In process. Publication scheduled for winter of 1967-68.

Agency: Florida State University, Urban Research Center, with support from International City Managers' Association.

Previous Digest Report: 13:2-51.

Research Problem. To investigate and determine the economic and social basis for realistic economic development programs for city manager cities under 10,000 population.

Hypotheses: Economic factors upon which small cities necessarily operate are inconsistent with the goals which these small cities typically pursue. By involvement in educational planning activities, community leadership can devise and define goals which are consistent with economic trends.

Method of Study. Available statistical and economic data will be used as a basis for appraising the economic positions of small cities. This will be accompanied by surveys of city managers to determine their concepts of conditions relevant to economic development. The results of this research will be described in working papers which will provide a basis for three community seminars to test methods of revising approaches of small city manager cities to economic development. (RMG)

47. TITUSVILLE DOWNTOWN DEVELOPMENT WORKSHOPS, AN EXPERIMENT IN COLLABORATIVE PLANNING

Main Investigators: David R. Godschalk and Robert M. Griffin, Jr.

Status of Research and Publications: Publication scheduled for summer of 1967.

Agency: Florida State University, Urban Research Center and Department of Urban and Regional Planning, with support from Ford Foundation

Previous Digest Report: 13:2-52.

Research Problem. To experiment with the involvement of citizens in the planning process through techniques of urban extension and collaborative planning.

Previous Relevant Research. Urban Extension: A report on Experimental Programs Assisted by the Ford Foundation (New York: Ford Foundation, 1966); David R. Godschalk and William E. Mills, Journal of the American Institute of Planners, XXXXII, No. 2 (March, 1966), pp. 86-95.

Hypotheses. (1) The university can assist community leadership in developing an action program for downtown development; (2) assistance to community leadership can be effectively provided through collaborative planning.

Method of Study. Participant observation. The development of the project was observed by an "urban agent" participating in community activities and by professional planners participating in a specific project to improve the downtown.

Major Findings. The collaborative planning process proved to be an effective technique for the involvement of citizens in active planning for the improvement of the downtown. The success of the technique suggested that it had possible broader utility in use in the urban extension process. The intervention of urban agents before and after the conduct of research, education, and planning activities appears to be essential. (RMG)

48. GOVERNMENTAL REORGANIZATION: LEADERSHIP ATTITUDE IN THREE URBANIZING AREAS

Main Investigator: J. William Stevens.

Status of Research and Publications: Investigation complete; publication pending.

Agency: Florida State University, Urban Research Center and Department of Urban and Regional Planning, with support from Ford Foundation.

Previous Digest Report: None.

Research Problem. East Central Florida Regional Planning Council forecast the growth of three areas within its region, and predicted that each would form separate urban areas. Each of these areas at present is governed by numerous local governments. The research problem was to investigate and determine the predisposition of leadership of each of these urban areas toward alternative approaches to governmental reorganization.

Method of Study. Mailed questionnaire to leaders identified through previous studies; interviews of selected key civic and governmental leaders. These empirical studies were preceded by investigation and general description of governmental structure in each area.

Major Findings. Leadership in each area differed greatly in pre-disposition towards change in governmental structure and in the alternatives which they tended to regard as the most favorable. These variations appear to be related to differences in existing governmental organization, power structure, position in the region, and recent social and economic change. The study is part of a continuing analysis of the planning process. (RMG)

49. CONTINUING EDUCATION OF MUNICIPAL OFFICIALS IN EAST CENTRAL FLORIDA

Main Investigator: Huey B. Long.

Status of Research and Publications: Completed. Mimeographed copies available from Urban Research Center, Florida State University.

Agency: Florida State University, Urban Research Center.

Previous Digest Report: None.

Research Problem. The research consisted of these seven goals, all concerned with municipal officials in east central Florida: (1) obtain data that would provide a measure of the regularity of their educational activities; (2) determine educational methods they preferred; (3) determine their interest and willingness to participate in educational activities related to their official duties; (4) determine which organization or institution they perceived as being responsible for providing educational programs for municipal officials; (5) determine subject matter areas of interest to them; (6) determine their attitudes toward resident short courses; and (7) determine the perceived adequacy of their educational preparation for public office.

Method of Study. Questionnaires were mailed to 177 officials in the seven-county east central Florida region. The seven counties include: Brevard, Indian River, Lake, Orange, Osceola, Seminole, and Volusia. The officials were randomly selected, using a list of random numbers. Approximately half the respondents receiving the first questionnaire were elected and half were appointed officials.

Major Findings. The major findings of the study were: (1) The mean number of years since the officials have participated in an educational activity was 5.24 and 6.41 years for elected and appointed officials, respectively.. (2) The major reason given by the elected officials for not participating in educational activities was the lack of courses. Appointed officials cited lack of time as the major reason. (3) Over 75 per cent of both groups cited an interest in educational activities. (4) The officials indicated that the Florida State University System and the Florida League of Municipalities should provide the educational programs for public officials.

(5) Fiscal policy and management was cited as the most desired topic
(6) Short-course residence study received varying degrees of support
(7) Most officials perceived their education as preparing them adequately for public office. (8) Educational programs that appear to have the potential for greatest support among the municipal officials in east central Florida contain the following elements: (a) conducted locally; (b) sponsored by a university; (c) the conference method used; (d) if the topic is fiscal management, governmental organization and administration, public relations, personnel management, police administration, and/or community planning. (HBL)

50. THE REGULATION OF PRIVATE WATER AND SEWER COMPANIES IN BREVARD COUNTY

Main Investigators: Richard L. Wallace and Jan W. Duggar.

Status of Research and Publications: Completed October, 1966. Limited number of mimeographed copies available from Urban Research Center, Florida State University.

Agency: Florida State University, Urban Research Center, with support from Ford Foundation, the Board of Regents of the State of Florida under Title I of the Higher Education Act of 1965, and the Brevard County Board of County Commissioners.

Previous Digest Report: 13:2-50.

Research Problem. To investigate the economic basis for the formulation of policies of the Brevard County Board of County Commissioners to regulate private water and sewer companies providing services outside municipalities in the rapidly urbanizing Cape Kennedy area. Between 1950 and 1966, the population of the County increased from 23,600 to 221,000. Such rapid growth makes provision of usual governmental services extremely difficult, and the governments in Brevard County have been unable to supply adequate water and sewerage service. The result has been the rapid development of many, small, privately owned water and sewerage companies. This study is concerned with Brevard County's attempts to regulate these small private utility systems.

Method of Study. Examine existing state regulations in Florida and elsewhere; the practices of certain counties in regard to regulations; compare these practices with alternatives of regulatory policies; examine the attempts of Brevard County to regulate these systems.

Major Findings. The trend in Florida is toward the national pattern of government owned water and sewerage systems. While the municipal and county governments in Brevard have been reluctant to assume the risks associated with extending service to new and sparsely settled subdivisions, growth in these areas makes acquisition by government attractive. The long-run solution to Brevard's regulatory problem probably lies in the development of county and/or municipal systems.

Under Florida law, a county has the option of subjecting its privately owned water and sewer systems to regulation by the Florida Public Service Commission. However, the FPSC maintains that the legislation establishing its right to regulate in this area gives unfair advantages to the regulated firms. Until this law is amended, Brevard County is well advised to undertake its own regulation. (RLW and RMG)

51. PUBLIC ADMINISTRATION CONTINUING EDUCATION SERVICE (PACES) ITS GENESIS AND EARLY DEVELOPMENT

Main Investigator: Pauline E. Council.

Status of Research and Publications: Completed.

Agency: Florida State University, Urban Research Center.

Previous Digest Report: None.

Research Problem. To determine whether a group of citizens from a diverse multi-county area which is experiencing change, who have formed a voluntary autonomous organization for the purpose of planning, promoting, and offering a program of education and training for persons in public service, can accomplish this purpose using the region as a base for planning and an off-campus center of a state university as the major resource.

Hypotheses. A group of citizens brought together in a voluntary autonomous organization will encounter problems in establishing goals and reaching a consensus. Some problems will stem in part from the motivations and behavior of individuals which are related to their occupations, community, and locale. The formulation of a regional program is complicated by these problems. The difficulty is further compounded by the factors of distance, lack of communication among members, and an overall absence of systematic interaction on a regional level.

Method of Study. The study utilizes a participant-observer case study made by the investigator during the organizational period of PACES. This case study is supplemented by information concerning the origin and formulation of the organization and literature related to planning, community organization, community development, personnel administration (in-service training), and continuing education.

Major Findings. The study provides support for the hypotheses in as much as the members succeeded only in identifying needs related to "good government" rather than any which were pertinent to the region. A dichotomy of interests persisted between those with interest in providing training for performance of a task and those who were concerned with education related to broad concepts. The conclusion was drawn that a regional institution had been established assuming that community organization and community development techniques could be transferred easily into the regional setting. In

contrast to this assumption the study demonstrates that the members of the group found the regional organization to be an unfamiliar frame of reference which was outside the scope of usual political and community activities. The study demonstrates it is definitely possible for such a voluntary autonomous organization to join forces in partnership with the staff of the university to effect accomplishments otherwise beyond the scope of the volunteer group. (PEC)

52. JUVENILE COURT DEMONSTRATION PROJECT

Main Investigators: J. M. Martin, J. P. Fitzpatrick, C. H. Elliott, J. F. Scheuer, C. F. Grosser, J. E. McElroy, M. H. Engel, A. L. Grey, and R. E. Gould.

Status of Research and Publications: In process.

Agency: Fordham University, Department of Sociology and Anthropology; New York University, Graduate School of Social Work; The Family Court of the State of New York within the City of New York; The Office of Probation for the Courts of New York City; under sponsorship of U. S. Department of Health, Education, and Welfare, Welfare Administration, Office of Juvenile Delinquency and Youth Development.

Previous Digest Report: None.

Research Problem. Demonstrate a means for changing the theoretical orientation, the diagnostic process, and the treatment program of the juvenile court.

Method of Study. The methods used will be a sociologically-oriented interdisciplinary theory of delinquent behavior, techniques of investigation required to apply this theory to the study of such behavior as it occurs in a given neighborhood, and the development of a community action program designed to address the cultural and organizational roots of such behavior as revealed by the perspective and the methods of study employed. (JMM)

53. GROWTH IN AN URBAN ECONOMY

Main Investigators: Robert C. Colwell and Philip D. Patterson, Jr.

Status of Research and Publications: Completed. Mimeographed copies available.

Agency: Georgetown University, Department of Economics.

Previous Digest Report: None.

Research Problem. To analyze and study the economy of a metropolitan area using secondary source material (censuses of Population, Housing, and Business, the CRP, the Comprehensive Plan, the Transportation study, etc.), and with information from this material to project the growth of the area, taking into account comparative advantage with other areas.

Hypothesis. In-migrants and out-migrants differ significantly enough to change the composition of the resident population in many fast growing communities. Migration from one city to other cities is a function of measurable characteristics of the other cities.

Method of Study. The Tulsa, Oklahoma SMSA was chosen as the subject because of its desirable feature as a relatively fast growing metropolitan area with distinct geographical separation from other metropolitan centers and with good sources of published economic data. The changing composition of Tulsa's resident population was examined by studying the social and economic characteristics of its in-migrants and out-migrants. Regression and correlation analysis was used to relate the number of out-migrants from Tulsa to seventeen other SMSA's with "attractive" characteristics of the seventeen SMSA's.

Major Findings. Tulsa has a more mobile population than the U. S. urban population as a whole and serves as a transformation point for rural to urban migrants (60.3% of the in-migrants to Tulsa came from rural areas in the 1955-60 period and 73.8% of the out-migrants from Tulsa went to other urban areas). The single most important explanatory variable of Tulsa out-migration to the seventeen SMSA's during the 1955-60 period was the amount of employment in the aircraft industry in those seventeen SMSA's. (PDP)

54. INTERRELATIONS BETWEEN RIVER BASIN DEVELOPMENTS AND DEVELOPMENT OF METROPOLITAN AREAS

Main Investigator: Guy J. Kelnhofner, Jr.

Status of Research and Publications: In process.

Agency: Georgia Institute of Technology, with assistance from the Office of Water Resources Research, U. S. Department of the Interior.

Previous Digest Report: 13:1-92.

Research Problem. Study the interrelations between the effects of river improvement proposals on the growth and development of metropolitan areas and the effect of metropolitan growth on the functioning of the river. Ways to achieve more effective coordination between river basin and metropolitan area development will be suggested. River basin development and metropolitan development are occurring with little formal means for coordination and joint planning between the two. However, the changes made by each affect the other.

Method of Study. Conduct a case study using the Chattahoochee River and the Atlanta Metropolitan Area as examples. Survey five other rivers and metropolitan areas for comparative purposes. Analyze the improvement projects proposed for the River. Estimate the effects of the improvements on the Metropolitan Area. Analyze the plans for development of the Metropolitan Area. Estimate the effects on the River of these planned developments. Describe any conflicts in development plans that may be foreseen and suggest ways to resolve conflicts if feasible. Recommend changes in current planning procedure appropriate to achieving better coordination between river basin development and the development of metropolitan areas. (GJK)

55. URBAN HYDROLOGY STUDY IN EAST POINT, GEORGIA

Main Investigators: Willard M. Snyder and Charles C. Jones.

Status of Research and Publications: In process.

Agency: Georgia Institute of Technology, School of Civil Engineering.

Previous Digest Report: None.

Research Problem. To establish working methods in urban drainage design, utilizing three small urban watershed studies operated essentially within the city limits of East Point, Georgia.

Method of Study. Continuous rainfall and streamflow data are obtained. Areas subject to flooding are determined. Impervious areas (buildings and pavements) are measured and located as sources of high intensity runoff. The frequency and extent of flooding of urban areas will be statistically defined. Flooding will be related to rainfall frequency, drainage area, surface features, and other factors as necessary to establish working methods in urban drainage design. (WMS)

56. HIDECS--RECOMPOSITION PROCEDURE

Main Investigators: Edward Bierstone, Allen Bernholtz, and Ralph Anderson.

Status of Research and Publications: Final draft with program listings of recomp and modifications of hidecs to be available shortly. Copies to be available from Howard Fisher, Director, Laboratory for Computer Graphics, Harvard University.

Agency: Harvard University, under sponsorship of National Research Council of Canada.

Previous Digest Report: None.

Research Problem. A design procedure employing a semi-lattice decomposition and hierarchical recomposition of a system with an associated linear graph.

Previous Relevant Research. The theory of design upon which the following procedure is based was developed by Christopher Alexander in Notes on the Synthesis of Form (1964) and the operational details and analysis algorithms are discussed in the publications HIDEC 2 and HIDEC 3 (1962). Revisions of these programs and the development of new procedures were made at Berkeley and at the University of Toronto.

Hypotheses: By formulating a system of minute requirements and interactions for a design problem, and employing a mathematical procedure to decompose the system into subsystems and hierarchically recombine these subsystems, the specific problem is allowed to generate its own structure based on internal interaction of requirements, complete with overlaps.

Method of Study. The form solution is synthesized by solving the subsystems hierarchically, gradually building up to the top level. (AIB)

57. THE DEMAND FOR MEDICAL CARE FACILITIES

Main Investigators: Gerald Rosenthal and W. John Carr, Jr.

Status of Research and Publications: In process.

Agency: Harvard University, Department of Economics, and Littauer School of Public Administration, under sponsorship of U. S. Department of Health, Education, and Welfare, Public Health Service.

Previous Digest Report: None.

Research Problem. To analyze the relationships between the social, demographic, and economic characteristics of population groups and their utilization (effective demand) of medical facilities. Specific analysis is being made of the degree to which utilization is affected by various economic aspects of the hospital experience, such as insurance type and coverage and the various charges for services as experienced by a large sample of admissions in New England for 1962. An ultimate aim of this project is the development of simplified procedures that would enable community and regional groups to use the techniques tested and refined as part of this research in their planning for the number and organization of medical care facilities. A pilot study in a single community is being undertaken to test the feasibility of this objective. (GR)

58. SOCIAL AND ECONOMIC MODERNIZATION OF INDUSTRIAL ENTERPRISE IN CHILE

Main Investigator: Stanley M. Davis.

Status of Research and Publications: Field work to begin January 1, 1968.

Agency: Harvard University, Graduate School of Business Administration, in cooperation with Latin American School of Sociology (FLACSO), Santiago, Chile, under sponsorship of Social Science Research Council.

Previous Digest Report: None.

Research Problem. While much is known about the social characteristics of both traditional and modern societies, very little is known about the processes of change from one to the other. Industrialization, the growing dominance of industry as the basis of increasingly complex forms of social organization, is central to this process of change. The research will therefore examine changes which occur in the social framework of economic organizations during modernization. It will focus on the interplay between industrial development and cultural tradition. The problem is, first, to specifically define what makes one firm "modern" and another "traditional" and, second, to determine the conditions and manner of change from one to the other. Why does one firm remain a traditional enterprise while another is able and willing to shed its earlier form?

Previous Relevant Research. This research is part of a larger study on comparative social change in Latin American enterprise being carried on by the investigator. Similar research, conducted in Mexico, was reported in a recently completed manuscript, Social Change in Mexican Enterprise.

Method of Study. A battery of operationally defined differences between "traditional" and "modern" organizations will be tested in order to determine whether the particular items cluster in ways that may be considered meaningful. The scales are grouped into attitudinal and structural categories. To determine the actual processes of change, detailed sociological case studies will be made of each enterprise included in the research. The organizations will be selected according to three dichotomized criteria which are important and common to both traditional and modern firms alike: size, location, and age (generation). The studies will permit qualitative comparisons, complemented by the quantitative indices within each firm (SMD)

59. UNRAVELING JUVENILE DELINQUENCY, PUERTO RICO STUDY

Main Investigators: Sheldon Glueck, Eleanor T. Glueck, and Franco Ferracuti

Status of Research and Publications: This project, initiated July, 1965, is expected to be terminated June 30, 1971.

Agency: Harvard University, Law School, in cooperation with U. S. Office of Education, University of Puerto Rico, and the Government of Puerto Rico.

Previous Digest Report: None

Research Problem. This is a repetition of the main features of an earlier study by the investigators, Unraveling Juvenile Delinquency, being conducted in Puerto Rico to determine which of the findings of the original study are indigenous to Boston and which may reasonably be regarded as etiologic constants.

Method of Study. Conduct an intensive social investigation of the family and personal background of 250 delinquents and 250 matched nondelinquents in Puerto Rico. Delinquency history will be noted; psychiatric interviews, psychological testing (Wechsler-Bellevue Form 1), analysis of body build from photographs, using the method developed in Unraveling Juvenile Delinquency, general medical examination, neurological examination and Rorschach tests will be administered. (HR)

60. DETAILED LAND CLASSIFICATION OF MAJOR ISLANDS OF HAWAII

Main Investigators: Harold L. Baker, Tamotsu Sahara, Edwin T. Murabayashi, Jr., Arthur Y. Ching, Jr., Faith N. Fujimura, Jr., Iwao Kuwahara, Jr., Eunice Awai, Jr.

Status of Research and Publications: The studies have been completed for five of Hawaii's six major islands. Reports are available from the Land Study Bureau, University of Hawaii, 2065 S. King Street, Honolulu, Hawaii 96822. Reports are complete and available for the Islands of Molokai (no charge), Oahu (\$1.50 per copy), and Hawaii (\$5.00 per copy). The Island of Maui report is to be available soon (\$2.00 per copy). The Island of Lanai report is to be sent to press soon. Island of Kauai report not yet completed.

Agency: University of Hawaii, Land Study Bureau, under sponsorship of State of Hawaii.

Previous Digest Report: None.

Research Problem. To develop, assemble, coordinate and interpret data on the characteristics and utilization of land throughout the State to the end that the highest and best use of those lands may be ascertained.

Previous Relevant Research. Generalized land classification reports at the scale of 1:62,500 were prepared earlier for the six major islands in the State. The classification was based upon the suitability of the land for intensively cultivated crops. Land use and land ownership (larger land ownerships) maps were prepared at the same scale. The generalized land classification maps were the basis for the development of the initial General Plan for the State of Hawaii.

Method of Study. The land classification involved field surveys to examine soils and slopes as well as to verify soil survey and land use data. All pertinent land and land use data were noted on recent aerial photograph base maps. The reports contain aerial photographs on which land type information has been overprinted in red. Reports also include alternative cropland uses and yields based upon modal levels of management.

Major Findings. The land classification reports will enable preparation of land inventory statistics upon their completion in 1967. These statistics are being developed from map measurements. The land classification reports are useful in locating lands fitting specifications presented by private and public agencies. It is useful for land assessment purposes as well as for land use zoning and land developments. (HLB and TS)

61. EFFICIENCY OF CROWDED CITY STREETS

Main Investigators: Not reported.

Status of Research and Publications: In process.

Agency: Highway Research Board, through contract with the Traffic Research Corporation (San Francisco), under sponsorship of American Association of State Highway Officials, in cooperation with U. S. Bureau of Public Roads.

Previous Digest Report: None.

Research Problem. To evaluate the effect of the best traffic regulation and control techniques known for crowded city streets.

Method of Study. The cities of Sunnyvale and Redwood City, California, have agreed to cooperate with the investigators in demonstrating various methods to improve the operational efficiency of their central urban streets. A step by step program is planned to measure the relative magnitude of change for each of the new traffic regulations and controls brought into play. (DHB)

62. STUDDER SNOW TIRES STUDY

Main Investigator: Not reported.

Status of Research and Publications: In process.

Agency: Highway Research Board, through contract with Cornell University, Cornell Aeronautical Laboratory, Inc., under sponsorship of American Association of State Highway Officials, in cooperation with U. S. Bureau of Public Roads.

Previous Digest Report: None.

Research Problem. Weigh the safety benefits of studded tires against added maintenance costs that result when studded tires are driven on bare pavements.

Method of Study. Correlate data on the frictional characteristics of studded tires on ice, packed snow, and wet and dry bare pavements, and how they relate to changes in tire performance. Examine the nature and the extent of road damage produced by studded tires compared to regular tires and tires equipped with other traction aids. Develop methods to measure wear and abrasion properties quantitatively. (DHB)

63. TRAFFIC CONTROL SYSTEM TO EASE FREEWAY RUSH-HOUR CONGESTION

Main Investigator: Not reported.

Status of Research and Publications: In process.

Agency: Highway Research Board, through contract with Texas A & M University, Texas Transportation Institute, and the Raytheon Company (Waltham, Massachusetts), under sponsorship of American Association of State Highway Officials, in cooperation with U. S. Bureau of Public Roads.

Previous Digest Report: None.

Research Problem. Determine ways to ease congestion on combined freeway and surface street systems that are overtaxed at rush hours, but adequate throughout the rest of the day. Highway planners are often prohibited from adding new lanes to freeways because rights-of-way are limited in heavily developed urban areas. Part of the plan is to direct traffic to arterial streets when freeways become jammed.

Method of Study. Test known methods for easing the flow of traffic as well as devise new ones. The investigators will also explore the feasibility of various mathematical models that would make it possible to mastermind the timing and spacing of vehicles on a freeway surface street system.

The study will be conducted on the National Proving Ground for Freeway Surveillance Control and Electronic Traffic Aids located on the John C. Lodge Freeway in Detroit. The Proving Ground has been equipped for freeway surveillance with a 14-camera, closed-circuit television system, a system of ultrasonic traffic detectors, and a Control Data Corporation 8090 digital computer. The closed-circuit television system is also used in the traffic control operation on the Proving Ground. In addition, systems of overhead lane control signals, overhead speed control signs and entrance ramp closure signals are used in the traffic control system. In the first stage, the investigators will evaluate the worth of each of these six types of equipment. The television system will be compared to other data collection methods for the accuracy of the data it collects, for the degree of effort required in coordinating the data, for the cost, area of coverage and the safety monitoring capability. In addition, the contribution of the television system in a traffic control system will be evaluated. It will include measuring the responsiveness of the system to accidents, troubled motorists, and obstacles on the freeway. The televised freeway operations will also be used as a display and demonstrative device for predicting traffic volumes and reducing congestion caused by such things as a police vehicle parked on the shoulder of the freeway with its red light flashing. The other components of the proving ground and traffic control system will also be evaluated during the first stage of the study. The system of overhead lane control signals, used to warn motorists of obstructions in the lanes ahead, will be studied for its effectiveness in keeping traffic moving. The overhead speed control signs, used primarily to warn motorists of congested areas so that they can reduce their speed if they're approaching the congested area or speed up if they're beyond it, will be tested. The speeds shown on the signs can be adjusted in accordance with information gathered from the closed-circuit television system. The researchers will test motorist reactions to see if drivers actually follow the speed changes indicated by the overhead signs. The system of sonic detectors, presently used to count cars and measure speeds, will be evaluated to

determine the accuracy of the data collected in this way. The system's computer, now being used primarily for research and not actually for traffic control, will have its performance measured against the requirements of the Proving Ground. The system of overhead ramp closure signals, designed to prevent vehicles from entering the freeway, was found to be only partially effective in tests already run by Proving Ground staff. (DHB)

64. DEVELOPMENT OF A NEW NON-RAIL TRANSIT VEHICLE

Main Investigators: Donald S. Berry, Paul E. Irick, and Byron A. Bledsoe.

Status of Research and Publications: In process. Completion expected in early 1968.

Agency: Highway Research Board, under direction of National Academy of Engineering, under sponsorship of U. S. Department of Housing and Urban Development.

Previous Digest Report: None.

Research Problem. To develop design and performance criteria for new non-rail mass transit vehicles, considering the transportation systems in which they would be used. Hopefully, the new vehicle will be adaptable to the variety of existing transit systems and to typical American cities, ranging from the smallest individual community to the large, complex metropolitan region; be free from noise, pollution, and other disruptive effects on cities, yet give improved performance in street traffic and overall safety. The project will also give attention to providing special service to particular segments of the population such as the aged, physically or economically handicapped, and to the possible use of multi-phase systems involving small-vehicle door-to-door pickup feeding larger trunk-line vehicles and the control and communications systems essential to their efficient operation. Other design and performance considerations for the new vehicle will be concerned with: riding comfort, including entry and exit doors and passages, seating arrangements, lighting, ventilation, heating, and air-conditioning; vehicle operation requirements extending to driver controls, visibility, seating, safety, and fare collection arrangements; and systems management concerns such as traffic performance, operating costs, schedule reliability, vehicle maintenance and durability. (DHB)

65. PROBLEMS EMANATING FROM HIGHWAY BEAUTIFICATION ACT

Main Investigators: Donald T. Sutte, Jr. and Roger A. Cunningham

Status of Research and Publications: In process. Completion scheduled for spring of 1968.

Agency: Highway Research Board, through contract with Donald T. Sutte, Jr and Associates (Hinsdale, Illinois), under sponsorship of American Association of State Highway Officials, in cooperation with U. S. Bureau of Public Roads.

Previous Digest Report: None.

Research Problem. Study the legal and property valuation problems growing out of the Highway Beautification Act of 1965, to assist those who administer the Act and related programs that include scenic and conservation easements.

Method of Study. Identify the legal and valuation principles for acquiring scenic, conservation, and roadside easements, as well as the legal rights and property interests connected with outdoor advertising, junkyard activities, and scenic enhancement interests. Set up guidelines for applying legal and valuation practices to highway beautification programs. (DHB)

66. URBAN TRAVEL PATTERNS FOR AIRPORTS, SHOPPING CENTERS, AND INDUSTRIAL PLANTS

Main Investigator: Not reported.

Status of Research and Publications: Completed. Published under the above title as NCHRP Report No. 24, available from Highway Research Board, Publications Department 805, 2101 Constitution Avenue, N. W., Washington, D. C. 20418. \$5.20 per copy.

Agency: Highway Research Board, through contract with Louis E. Keffer (Milford, Connecticut).

Previous Digest Report: None.

Research Problem. Study the urban travel patterns generated by airports, shopping centers, and industrial plants in representative American cities.

Method of Study. Data were obtained from transportation studies on specific site activities in Atlanta, Buffalo, Chicago, Minneapolis-St. Paul, Pittsburgh, Providence, Denver, Detroit, San Diego, Wilmington, Delaware, Miami, Philadelphia, Washington, D. C., Seattle, Tacoma, and Salt Lake City.

Major Findings. Mass transit and taxicabs account for less than ten per cent of resident trips to airports, less than three per cent of trips to shopping centers, and about 23 per cent of the trips to industrial plants. The trend in recent years has been toward more and more people driving to these three sites, usually located on the outskirts of urban areas. Car pools are unpopular. As the number of two- and three-car families increases, the trend of one car carrying one person also grows. Though the total volume of traffic may not be large, all three sites generate heavy concentration of traffic at certain times of the day and seasons of the year. Highways will have to be designed with sufficient capacity to carry travelers safely to and from major traffic-generating locations. The findings in this detailed report, including multiple regression analyses of the trip generating factors, are of particular value to highway planners, traffic engineers, and highway design engineers. (DHB)

67. COMPUTING DESIGN RUNOFF FROM URBAN AREAS

Main Investigators: John B. Stall and Michael L. Terstriep.

Status of Research and Publications: In process.

Agency: State of Illinois, Illinois State Water Survey

Previous Digest Report: None.

Research Problem. Study the effects of watershed and rainfall characteristics on runoff from urban areas.

Method of Study. Interviews with 14 consulting engineering firms have shown the rational method to be in wide use in the design of urban storm drainage systems. The rational method and other more recently proposed methods for computing runoff peaks or complete hydrographs will be tested on a 3.7 square mile urban basin in which the stream has been gaged since 1950. Four rain gages in the basin and 11 in the vicinity have been operated since 1949. A time-area diagram, per cent of imperviousness, stage-storage relationship, and unit hydrographs have been developed for the urban area. Effects of variable rainfall on the basin also will be considered. Recommendations may be made for the computation of design runoff from urban areas of Illinois. (JBS)

68. INTERGOVERNMENTAL RELATIONSHIPS IN THE ADMINISTRATION OF WATER RESOURCES IN ILLINOIS

Main Investigators: Norman G. P. Krausz, Glendon S. Meyer, H. W. Hannah, and Howard Chapman.

Status of Research and Publications: In process. Completion scheduled for June 30, 1968. Publication of a bulletin is anticipated.

Agency: University of Illinois, College of Agriculture.

Previous Digest Report: None.

Research Problem. To study and analyze intergovernmental relationships in the administration of water resources in Illinois. Nearly 2,000 local governmental units in Illinois are charged with some responsibility relating to water supply, use, conservation, flood control, or pollution. Being independent units and almost all with taxing power, there is very little integration or even coordination in the administration of water resources. On top of this local government system, at least 15 state agencies are concerned with some facet of water resource development, protection, or control. A serious problem also exists with present boundaries. Except for some special districts such as drainage districts, the boundary of a single political unit generally includes only a portion of the water problem area. In most situations, legal-institutional structure neither requires nor encourages solutions on an intergovernmental basis. With the impact of new state

and federal authority and funds for water development, management, and quality control, a new administrative complication has arisen, that of local governmental relationships with the state and federal governments. Illinois has by general statutory authority been given a key role in water management throughout the State. Governmental and administrative links, however, are still weak and largely underdeveloped. The rigidities of existing local government organization appear to have flexed only in a few instances, most frequently when a planning commission begins to exert its influence, and when funds are offered on conditions.

Method of Study. Preliminary work involves classifying and summarizing Illinois statutory laws relating to water resources on the basis of: (1) responsibilities placed on local units of government; (2) authority in various state departments; (3) degree and kinds of coordination and/or integration required or allowed between local units, state departments, and between local units and state departments; and (4) extent of duplication and conflict. Identification and description of the legal institutions and administration regulations now being used in water development, management, and quality control will be included. After this phase, an appraisal and evaluation will follow of the legal institutions and administration structures, processes and techniques in water development, use, management, and quality control. A field study in two to four counties will be required to gain empirical data on application of laws, coordination of effort, expenditure of federal, state, and local funds, adaptability to emerging federal-state effort, cost of administration, utilization of community resources, and rigidities in present government organization.

The counties or areas for the field study will be carefully selected to account for geographical differences and scope of water development and control activity. The field study also should be helpful in assessing the consequences of large numbers of government units having boundaries which circumscribe only a portion of the water problem area and which operate independently in water resources management. Finally, modification will be suggested in regard to: (1) use of public special districts in water resource management; (2) enforced coordination versus use of larger governmental units specializing in water management and quality control; (3) administrative processes to promote necessary intergovernmental relationships; (4) possible expanded responsibility for planning commissions; and (5) possible changes in statutory provisions relating to water administration. Wherever necessary or appropriate, the authority and program of federal agencies will be studied as their activities relate to water project planning, financing, and execution, and also in relation to the difficulties of local sponsorship and coordination. (ES)

69. ECONOMIC ASPECTS OF THE PESTICIDE PROBLEM

Main Investigators: J. C. Headley and J. N. Lewis.

Status of Research and Publications: Completed and published January, 1967.
Distributed for Resources for the Future by The Johns Hopkins Press,
Baltimore, Maryland 21218. \$3.50 per copy.

Agency: University of Illinois, Department of Agricultural Economics,
under sponsorship of Resources for the Future, Inc.

Previous Digest Report: 13:1-103.

Research Problem. To develop guidelines for public policy addressed to control of development, manufacture, and use of chemical pesticides to achieve optimal quality of the environment. (JS)

70. THE IMPACT OF INDUSTRIALIZATION ON A RURAL-AGRICULTURAL SOCIAL SYSTEM

Main Investigators: C. L. Folse, J. T. Scott, Jr., Walter Franke, George J. McCall, Harvey Schweitzer, Gene F. Summers, and John Clark

Status of Research and Publications: A long-term study in process.

Agency: University of Illinois, Agricultural Experiment Station, and the Department of Agricultural Economics.

Previous Digest Report: None.

Research Problem. In April, 1965, Jones and Laughlin (J & L) Steel Corporation announced plans to develop a major production complex in the Hennepin Area of Putnam County, Illinois. Announcements indicated that this would represent an investment of several hundred million dollars and would employ a considerable amount of labor. J & L expect the development of a completely integrated steel manufacturing complex from smelting to steel fabrication and, in addition, the growth of industries that consume large quantities of steel. Putnam County was entirely rural in 1960 with about 4,500 inhabitants. Although the Jones and Laughlin complex will be located in Putnam County, its influence will probably extend into significant portions of the contiguous counties of Marshall, LaSalle, Bureau, and Stark. Although these counties are somewhat less rural than Putnam, in the aggregate they are dependent upon commercial agriculture. The combined 1960 population of the five-county area was approximately 175,000. Numerous auxiliary developments, such as transportation companies, material suppliers, commercial business, residential development, and service enterprises will develop to support the steel manufacturing complex and its labor force. In short, a commercial-industrial complex will develop in a rural area that essentially has depended upon commercial agricultural enterprises and related agricultural industry.

The primary objective of this research is to determine through an integrated interdisciplinary approach the basic processes of change in a rural socio-economic system undergoing rapid industrialization. Specific emphasis will be directed to empirically determining the degree of change over time and the basic processes in: (1) agricultural and non-agricultural economies; (2) power structure and decision making processes; (3) population and ecology; (4) work orientations; (5) systems of social control; (6) organization of schools, churches and governmental systems. By documenting the

process of change and adjustment and by periodic restudy at stated intervals, the study is designed to provide information for projecting expected changes likely to occur in other rural areas undergoing similar industrial development. It is hoped that this information will lead to a more orderly transition and adjustment of human and socio-economic resources to industrialization and urbanization wherever it might occur.

Method of Study. The first phase is a longitudinal household survey based on a probability sample of households in the affected area and in a control or comparison area, including questions to determine the broad socio-economic organizational structure of the area and the utilization of economic and human resources. The same panel of households (except for attrition of the initial sample) will be resurveyed at periodic time intervals along with a sample of new households that move into the area. These restudy time intervals, following initial benchmark survey, will follow these approximate sequences: (1) peak of plant construction (1967), (2) initial operation of the J & L Steel Rolling Plant (1968), (3) three years after full operation of the plant, (4) a terminal survey (1975-76) undertaken after the development process of industrialization matures into a completely integrated manufacturing complex from steel smelting to steel fabricating. After each phase of the longitudinal household surveys, data will be analyzed by appropriate research methods, results deemed appropriate will be released, and continuing evaluation of research procedures made for project improvement.

The second phase consists of intensive studies focusing on particular subsystems of organization within the community. Some will attempt to assess and measure changes in real estate markets, land valuation and zoning, capital use and expectations of local business proprietorships, and resource allocation within agriculture and between agriculture and industrial and commercial uses. Others will assess present and future needs and the changes in government services and facilities, schools and educational systems, transportation requirements, and the community power structure and decision making processes. Intensive research work also will be directed to manpower and labor problems, in-migration of labor, upgrading and retraining of labor, part time employment, and the development of professional occupational groupings. Further, specialized research will be aimed at assessing changes in nationality and racial groupings and their effects on the community, schools, churches and religious structure, and changes in spatial and ecological arrangements resulting from industrial uses of labor. Changes in attitudes and social values among the residents will be assessed and analyzed. Attention will be directed to analyzing over-all demographic changes to assess the extent to which these reflect vital and structural characteristics associated with urbanization and industrial systems. Maximum use will be made of data from federal censuses of population, agriculture, and housing, and relevant county, municipal, and school records, for documenting changes and adaptations in the major systems of the community (region). These data will be supplemented by observations of a resident research worker. Analyses of specialized studies and their publication will be correlated with the longitudinal panel household survey phases. Both approaches will complement and supplement each other and will be integrated into the entire study. (ES)

71. THE PHILOSOPHY AND PRACTICE OF NEW TOWN MANAGEMENT IN GREAT BRITAIN

Main Investigator: Eric C. Freund

Status of Research and Publications: Preliminary research in process

Agency: University of Illinois, Bureau of Community Planning, under sponsorship of John Simon Guggenheim Memorial Foundation.

Previous Digest Report: None.

Research Problem. The New Towns Act of 1946 is the basic legislation under which British New Towns have been created. The Act gave the Minister of Town and Country Planning (now the Minister of Housing and Local Government) and the Secretary of State for Scotland power, as the responsible ministers, to designate any area of land as the site for a New Town, and many areas have thereby undergone progressive and fundamental changes. In this manner some 21 New Towns have been designated, 18 of which are operational and 3 of which are in the early stages of design and land assembly

The main objective of the research will be to examine the way in which the authorities concerned handled the delicate task of administration of each of the New Towns, from the time of the first land assembly to the completion, or substantial completion, of the project. An identification of original or subsequent goals and objectives will be sought and an attempt made to see how these were achieved, or why failures were experienced. A secondary objective will be to obtain first-hand on-site information on British New Town administration for later use in a comparative study with new towns now under construction in the United States.

Previous Relevant Research. Much has been written in relation to the physical design of the New Towns, some works have been written on government policy at the national level, and some sociological studies have been made which examine the reactions of the New Town immigrants to their new, and often unfamiliar environments. In general, however, interest has been focussed mainly on the physical aspects of the developments and not on the way in which this most complicated and sensitive task of human and material synthesis has been accomplished by the authorities involved.

Method of Study. Basically, the study will utilize personal interviews of selected key persons in each of the new towns; supplemental correspondence with these persons; a survey of publications, official memoranda, and other documents on site, or later delivered; personal interviews with significant persons not on site, such as consultants and members of central government departments; correspondence with official bodies; library research over a period appropriate to the age of each New Town; and personal on-site observations. The investigation will culminate in a written document which, it is anticipated, will be of interest to both the academic and the practicing city planner, to the sociologist, to persons at the federal government level, and to developers of prospective new towns. (ECF)

72. THE LANGUAGE OF PLANNING

Main Investigator: Albert Z. Guttenberg.

Status of Research and Publications: In process. A partial interpretation of findings to date published in Landscape, Vol. 16, No. 2, Winter, 1966-67.

Agency: University of Illinois, Bureau of Community Planning and Department of Urban Planning.

Previous Digest Report: 12:2-41.

Research Problem. To study the structure and social dynamics of city planning from the standpoint of its language and professional literature; to explore the possibilities of a scientific language for city planning. (AZG)

73. GEOLOGY OF THE UPPER EAST FORK DRAINAGE BASIN, INDIANA

Main Investigators: Henry Gray and Robert F. Blakely.

Status of Research and Publications: Completed and published under above title as a Special Report No. 3, Indiana Geological Survey.

Agency: Indiana University, under sponsorship of Indiana Geological Survey.

Previous Digest Report: None.

Research Problem. An intensive study of the most densely inhabited portion of the drainage basin of the East Fork of White River in central Indiana to provide geologic information and assistance in the preparation of models for groundwater studies. The geologic portion of this investigation is being coordinated with hydrologic, meteorologic, and biologic studies, as well as studies of the pollution of the White River. (HG)

74. STUDY AND EVALUATION OF KANSAS CITY COMMUNITY ACTION PROGRAM

Main Investigators: Constance Osgood, Robert Bechtel, Edgar Chasteen, and Wallace Wells.

Status of Research and Publications: Commenced June 1, 1966, scheduled for completion November 30, 1967.

Agency: Institute for Community Studies (Kansas City, Missouri), under contract with U. S. Office of Economic Opportunity, in cooperation with the Human Resources Corporation and delegate agencies.

Previous Digest Report: None.

Research Problem. To assess the effects of the Community Action Program on the conditions and dynamics of poverty in Kansas City, Missouri. The scope of the project includes: an assessment of individual, social, and institutional change in the "target poverty areas"; assessment of the net impact of the program in the community; and an analysis of the organization of the Human Resources Corporation and its component units.

Method of Study. The project utilizes the Field Survey Method for collection of information. An appraisal of relevant variables will make it possible to compare the population in the target areas who are being served by the Community Action Program with those in the target areas who are non-participants in the program, and to compare this population with aggregates outside the target areas in order to ascertain whether the poor are different and, if so, in what ways. One group of variables to be included in the data collection are socio-economic variables, such as sex, race, age, residential mobility, education, employment. A measure of housing conditions is also essential. Also of concern are the psychological variables of aspirations and self-esteem. A final area of measurement centers on program reputation variables, as perceptions of and participation of the poor in social organizations and institutions, and the Community Action Program in particular.

The Community Action Programs will receive periodic feedback of the research data. Having the data available while programs are in progress, rather than at their conclusion, will assist them to make changes if it appears necessary. The simultaneous conduct of research and action should reduce the economic and social costs of the programs while, at the same time, maximizing the return, i.e., the reduction of poverty. (VW)

75. SOCIAL-PSYCHOLOGICAL REHABILITATION IN MENTAL HEALTH PROBLEMS

Main Investigators: Donald W. Tiffany, William B. Eddy, Donald D. Glad, and James R. Cowan.

Status of Research and Publications: Final report in progress and completion expected summer of 1967. Copies to be available from Institute for Community Studies, 2300 Holmes, Kansas City, Missouri.

Agency: Institute for Community Studies (Kansas City, Missouri), and the Greater Kansas City Mental Health Foundation, with support from U. S. Department of Health, Education, and Welfare, Vocational Rehabilitation Administration.

Previous Digest Report: None

Research Problem. Investigate the work adjustment of a sample of ex-patients, following treatment in a comprehensive community mental health center. The population studied represents the problem of rehabilitation and mental health among the economically disadvantaged population of a large metropolis. A major aim of the project is to extend a planning study by investigating self-perceptions of workers versus non-workers

Hypothesis. One's choice of being a worker or a non-worker is related to his self-perceptions. A useful understanding and treatment of work success or failure can be developed by the study of perceptions of self in general, and self in home and work situations in relation to selected demographic variables. Such results will provide a basis for developing principles for effective vocational rehabilitation of ex-mental patients.

Method of Study. A mailed questionnaire was used to obtain self-referent measures and demographic characteristics. The questionnaire was divided into two parts, i.e., test conditions. The first part dealt with one's actual state of affairs, the second with one's ideal state of affairs. Each section was further divided into self-descriptions in general and self in home and work situations. Under each combination of test condition and situation there were 14 self-referent items. This provided a 2 x 3 x 14 design in a questionnaire form, which was mailed to the S's. The S's for the study consisted of 264 ex-psychiatric patients. Thirty-seven of these experimental S's were matched with a control sample of ex-medical patients on all demographic characteristics.

Major Findings. Enough analysis has been completed to indicate: (1) the respondents in the sample are a biased representation of the population from which they were drawn; (2) the employed and unemployed differ significantly in many areas of self-reference, particularly as a function of certain demographic characteristics; and (3) the actual-ideal discrepancy is highest for the unemployed suggesting an absence of self-direction, mastery, or ability to attain their desired aspirations. (DT)

76. CHANGING PATTERNS IN THE PROVISION AND UTILIZATION OF HEALTH SERVICES FOR THE AGED

Main Investigators: Rodney Coe, Eugene Friedmann, Warren Peterson, and Jack Sigler.

Status of Research and Publications: Commenced April 1, 1966, completion scheduled for March 31, 1970. A publication resulting from the study to date is Jack E. Sigler and Louise R. Bryant, Provision and Utilization of Health Facilities and Services: A Selected Annotated Bibliography, June, 1966. Available without charge from the Institute for Community Studies, 2300 Holmes, Kansas City, Missouri

Agency: Institute for Community Studies (Kansas City, Missouri), under sponsorship of U. S. Department of Health, Education, and Welfare, Division of Chronic Diseases, Gerontology Branch.

Previous Digest Report: None.

Research Problem. To document the effects of the 1966 Social Security Amendments (Medicare) legislation upon the patterns of utilization of health care facilities and the community's organization and provision of these facilities.

Method of Study. The study is organized in such a manner as to approach the problem from two separate points of view. One will be a household survey of persons 60 years of age and over. From these people, data will be collected concerning their changing patterns of utilization as well as changes in their attitudes and beliefs concerning health care. The second approach will involve a community analysis of current and future organization and provision of health facilities. In all, five Midwestern communities (Kansas City and Springfield, Missouri, Great Bend, Kansas; Cedar Rapids, Iowa; and Waupaca, Wisconsin) will be included. The most unique feature of the study will be an attempt to integrate the effects of interaction. The first data collection phase of the study was completed in the fall of 1966. A second data collection phase is planned for the fall of 1968. (VW)

77. INTERPERSONAL SKILLS IN THE ELEMENTARY SCHOOL, KANSAS CITY SCHOOL DISTRICT

Main Investigators: Paul H. Bowman, Mary Meehan, and Oren Glick

Status of Research and Publications: Initiated June, 1965, completed January, 1967. Findings to be compiled and published by fall of 1967.

Agency: Institute for Community Studies (Kansas City, Missouri), under sponsorship of National Institute of Mental Health.

Previous Digest Report: None.

Research Problem. This project had its origin in the joint concerns of school officials and mental health personnel for the increasing number of emotional and behavioral problems among children. A prior contract with the Mental Health Foundation to provide clinical services for a limited number of disturbed children had become inadequate in the face of increasing need. It was decided to undertake a project based on a different conception of how to meet the needs of the disturbed child. A teacher training program was developed based on the utilization of group methods. The general objective of the present project is the implementation and further development of a training program to assist teachers and administrators with specific techniques for providing mentally healthful learning situations. Two demonstration centers have been established and a workshop conducted for the teachers and principals of some "inner-city" schools

Previous Relevant Research. This project was preceded by a School Behavior Project, which had as its general objective the training of teachers in the elementary schools in the Kansas City, Missouri, public school system, as well as research to evaluate the effects of such training. Resulting publications were: A Teacher Training Program in Classroom Mental Health, September, 1964. The Use of Small Groups in the Classroom, September, 1964. The Elementary School Journal, Meehan and Schusler, "Small Groups in Sixth Grade," Vol. 67, No. 5, February, 1967, pp. 241-245. Several unpublished papers were also prepared.

Hypotheses. It is possible to develop techniques of dealing with school children in groups; these techniques can be taught successfully to teachers; when utilized skillfully, these techniques will change the social atmosphere of elementary classrooms; this modified social atmosphere will significantly reduce the amount of delinquency and severe emotional disturbance among those children predisposed to such problems; this modified social atmosphere will significantly increase the academic learning of all pupils; the training and changed classroom role will result in significant personal changes in the teacher herself.

Method of Study. An experimental design, involving teachers who volunteered for the project, included both experimental groups and control groups. The program was limited to the sixth grade level for practical reasons. The participants were matched on four variables: experience, sex, teaching competence, and socio-economic characteristics. Evaluation instruments were administered pre-workshop, post-workshop, and post-school year. Trained observers visited the classrooms.

Major Findings. The results appear to be generally favorable in support of the hypotheses. (VW)

78. PSYCHO-SOCIAL CORRELATES OF WORK INHIBITION

Main Investigators: Donald W. Tiffany, Franklin C. Shontz, and James R. Cowan.

Status of Research and Publications: Project commenced December 1, 1966, scheduled for completion November 30, 1968.

Agency: The Institute for Community Studies, and the Missouri Division of Employment Security (Kansas City, Missouri), with support from U. S. Department of Health, Education, and Welfare, Vocational Rehabilitation Administration

Previous Digest Report: None.

Research Problem. Identify significant psycho-social variables that are basic to any successful rehabilitation program engaged in counseling the unemployed individual. It is believed that the work-inhibited individual is blocked or prevented from working because he is, in part, psychologically disabled. These individuals have a characteristic attitude toward work that cannot be substantially modified by altering the work environment or teaching them skills to function on certain jobs. This does not minimize the significant aspect of these contributions, but instead, directs the efforts to another significant aspect of the rehabilitation process that has been largely neglected as a major concern.

Hypotheses. (1) The work-inhibited are not self-directed. They lack a sense of being responsible for their own welfare, relying upon chance, fate, or any external force to give them direction. They show an absence of control over themselves or their environment. (2) The work-inhibited are inclined to identify themselves with a "sick role," seeing themselves as psychologically handicapped and unable to develop their potentials. (3) The work-inhibited tend to respond more favorably to authoritarian interpersonal relationships.

Method of Study. (1) Differentiate the work- or vocationally-inhibited individual from a similar group of individuals who are not work-inhibited on measures assessing expectancies (self-directed versus nonself-directed), role identifications ("patient" versus "nonpatient"), interpersonal relationships, and personality attributes. (2) Attempt to identify the nonworker's reaction and ability to change expectancies under authoritarian, democratic, and objective interview conditions (3) Attempt to formulate a counseling theory and implement techniques toward rehabilitating the vocationally-inhibited individual. (JC)

79. THE REDRESS OF CITIZEN GRIEVANCES IN CALIFORNIA'S URBAN AREAS

Main Investigators: Randy H. Hamilton and David K. Smith.

Status of Research and Publications: The following publications have been issued: A Preliminary Inventory of Selected Administrative Procedures for the Redress of Citizen Grievances in California's Urban Areas, August, 1966. No charge, but the supply of copies is exhausted. The Mexican "Amparo" as a Supplemental Remedy for the Redress of Citizen Grievances in California, January, 1967. No charge. The supply of 4,000 copies nearly exhausted. Available from Institute for Local Self Government, Hotel Claremont Building, Berkeley, California. Project is in its final stages. Results and proposals currently being assembled into book. In addition to research, a conference was conducted in September, 1966, where a panel of prominent practitioners and academicians presented proposals for improving redress procedures. Conference results are being assimilated into the final report.

Agency: Institute for Local Self Government (Berkeley, California), under sponsorship of Stern Family Fund

Previous Digest Report: None.

Research Problem. Evaluate the effectiveness of current appeals procedures in local government and suggest new ways of dealing with citizen grievances. There is growing conflict between liberty and authority. Urban government, the branch supposedly closest to the people, has become most alienated from many of them. An increasingly large number of discretionary decisions are being made (or not being made) by local government affecting the rights of citizens.

Hypotheses. Residents of urban areas are, paradoxically, becoming alienated from the government closest to them as a result of the proliferation of the administrative state. Present complaint machinery in many areas of local government tends to be slow, complicated, and costly. There is a need for new legislation and new administrative procedures to provide effective, accessible, and inexpensive grievance machinery.

Method of Study. An inventory of complaint procedures was conducted in selected metropolitan areas of California in order to catalogue the present practice or lack of practice of appeals procedures and to make recommendations for administrative reorganization to more efficiently and effectively deal with citizen complaints. In addition, a conference of interested educators and administrators was held in order to promulgate ideas, proposals, and suggestions for new legislation and new administrative procedures to provide effective and operative grievance machinery.

Major Findings. Though the scope of governmental services is broadening to create more intricate and confusing patterns of responsibility in public administration, many local governmental agencies in California have become increasingly aware of the need to improve complaint handling procedures. Some have instituted new administrative solutions. More than 30 county and city governments have created human relations commissions within the last three years to deal with social and economic complaints. San Diego has created the office of Citizens' Assistance Officer. The present trend looks toward the creation of many more such agencies in California's urban areas within the next few years. These agencies may be assigned various duties and functions to widen their potential for handling citizen complaints. The investigators have also focused on the "Amparo" as a possibility for the supplemental redress of citizen grievances. The "Amparo" existed as a part of the common law which California inherited from Mexico until the adoption of the 1849 Constitution. The concept still exists in the minds of many Mexican-American residents in California. Careful scrutiny of this redress procedure may lead to revitalization of the concept in California.

It has been discovered that few, if any, administrative agencies in cities or counties keep adequate records of complaints and grievances. Periodic reviews are seldom made and then not on a regular basis. In some areas, formalized appeals procedures have not been implemented. When review of an administrative determination is required, an informal method of handling the complaint is often adopted. This leaves much discretion for "passing the buck" when valid but unpopular complaints are launched. Most dissatisfactions do not appear to be constitutional in nature. Rather, they deal with the quality of service, the speed of action, and the personal manners of administrators. Hence it is felt that particularized remedies should be sought to solve specific objectives. (RHH)

80. INTERNATIONAL URBAN STUDIES PROJECT

Main Investigator: Ann-Marie Walsh.

Status of Research and Publications: A four-year project in process. The International Urban Studies series is being published by Praeger Special Studies. The first three books will be available summer of 1967: Urban Government for the Paris Region, Urban Government for Metropolitan Lagos, and Urban Government for Zagreb. A comparative survey, Administrative Aspects of Urbanization to be ready for publication shortly. Information on publisher and date

to be available in the next Digest issue. Further information available from Mrs. Ann-Marie Walsh, Institute of Public Administration, 55 West 44th Street, New York, New York 10036.

Agency: Institute of Public Administration, under sponsorship of Ford Foundation, in cooperation with United Nations, Public Administration Branch.

Previous Digest Report: None.

Research Problem. To investigate and compare urban administration in Europe, Africa, Asia, and North and South America.

Method of Study. Field reports were prepared in 13 metropolitan areas on the basis of a detailed research outline developed by IPA. From these, monographs on each area are prepared for publication. A comparative study dealing with city government, metropolitan organization, intergovernmental relations, and urban planning has also been prepared on the basis of these case studies. This study will be used by the United Nations for conference purposes, leading to preparation of a U. N. report on the subject.
(AMW)

81. STUDIES OF NEW YORK CITY GOVERNMENT ORGANIZATION AND POLICY

Main Investigators: Lyle C. Fitch, Henry Cohen, and Howard N. Mantel.

Status of Research and Publications: Research project in several phases
Work on reorganization of New York City executive departments and agencies complete; a report prepared by the Mayor's Task Force on Reorganization of the New York City Government available without charge from Howard N. Mantel, Institute of Public Administration, 55 West 44th Street, New York, New York 10036.

Agency: Institute of Public Administration, under sponsorship of Russell Sage Foundation.

Previous Digest Report: None.

Research Problem. (1) Studies of problems of organization for effective management in the City of New York and proposals to consolidate more than 50 departments and agencies into ten administrations (2) Studies of the problems of transition between administrations of elected chief executives at state and local levels. (3) Revision of IPA publication on government organization in New York City. (HNM)

82. LOW INCOME HOUSING DEMONSTRATION PROJECT

Main Investigators: Edward K. Rice, Pauline H. Rogers, Charles Agle, and Thelma Palmerio.

Status of Research and Publications: Demonstration of three buildings, using technique described below, now complete; research on evaluation underway. Report to be available late summer of 1967 upon request from Howard N. Mantel, Institute of Public Administration, 55 West 44th Street, New York, New York 10036.

Agency: Institute of Public Administration, through contract with CONRAD Engineers, under sponsorship of U. S. Department of Housing and Urban Development.

Previous Digest Report: 12:2-48.

Research Problem. To determine the feasibility of rehabilitating old law tenements by advanced engineering and systems techniques; and to evaluate its potential application to solution of urban housing problems for low income groups. Two key elements of the demonstration technique are: (1) the preassembly of a kitchen-bathroom core unit, off site, which can then be inserted into the building being rehabilitated via a hole in the roof; and (2) reducing dislocation of tenants to only 48 hours during which time the cores are inserted, old interior walls removed, and interior is completely rehabilitated. (HNM)

83. SURVEY OF EARLY CHILDHOOD EDUCATION PROGRAMS IN NEW YORK CITY

Main Investigator: Milton Young.

Status of Research and Publications: General survey completed. Specific problems such as teacher training, neighborhood coordination, and new staffing patterns being studied intensively on an ongoing and experimental basis.

Agency: Institute of Public Administration, under sponsorship of Taconic Foundation and Field Foundation.

Previous Digest Report: None.

Research Problem. To survey the entire range of childhood programs in New York City, submit recommendations for the administrative coordination of existing programs, and suggest strategies for their future development and expansion.

Major Findings. There is absence of coordination between publicly funded early childhood programs, i.e., Board of Education, Head Start, Parks Departments, Department of Welfare, Day Care; inequitable distribution of programs in respect to need; serious differences in salary and personnel practices between programs; crippling lack of licensable facilities and renovation funds; severe shortage of trained teachers to staff existing and future programs; lack of continuity between pre-school and kindergarten (with some children out of school a year between pre-school and the first grade). The investigators make these recommendations: (1) Establishment of New York City Inter-Agency Early Childhood Board, composed of representatives of publicly funded programs, to establish priorities and arrange for coordination; (2) Establishment of Office

of Early Childhood to execute policies established by Early Childhood Board, to coordinate teacher training and facility finding; (3) Foundation of Early Childhood Committees of the community corporations or other coordinating agencies to implement coordination at the local level; (4) Expansion of full day care service with priority for ADC mothers for whom there are job or job training opportunities; (5) Development of a new staff training and organization pattern making maximum use of licensed teachers and para-professionals and incorporating family day care in continuous in-service training and program planning. Development of new career lines for para-professionals in teaching, social work, and health. (MY)

84. MENTAL HYGIENE RECODIFICATION PROJECT

Main Investigator: Howard N. Mantel.

Status of Research and Publications: Drafts of legislation in several subject areas (Admissions, Regulation and Quality Control, and Community Mental Health and Mental Retardation) now available. Others to be available soon. Over all draft of complete legislation and report to Department of Mental Hygiene available early summer of 1967 upon request from Howard N. Mantel, Institute of Public Administration, 55 West 44th Street, New York, New York 10036.

Agency: Institute of Public Administration, under sponsorship of Department of Mental Hygiene, State of New York.

Previous Digest Report: 12:1-63.

Research Problem. To investigate desired and necessary changes in the laws of New York applicable to the mentally ill, mentally retarded, drug addicts, alcoholics, and others with emotional or psychiatric disorders, and to prepare legislation to reflect changes in the psychiatric and related arts and to achieve improved administration of mental health facilities. End product will be new legislation introduced in the New York State Legislature. The proposals are expected to serve as a national model for adoption in other states. (HNM)

85. CONGRUENCE AND MEANING: THE INFLUENCE OF CONSISTENCY BETWEEN URBAN FORM AND ACTIVITY UPON ENVIRONMENTAL KNOWLEDGE

Main Investigator: Carl Steinitz.

Status of Research and Publications: Doctoral dissertation for Department of City and Regional Planning, Massachusetts Institute of Technology, completed March, 1967. Manuscript for publication in preparation.

Agency: Joint Center for Urban Studies of Harvard and Massachusetts Institute of Technology.

Research Problem. To demonstrate that there are measurable correspondences-congruences--between urban form and activity, and that the regularities in these relationships have a major influence on the amounts and kinds of meanings which the environment transmits and which people can acquire.

Method of Study. The effectiveness of the environment in transmitting meaning was hypothesized to be a function of its environmental characteristics of the form and activity attributes and the congruences between them. Predictions were made about the influences of congruencies between form and activity types, between the visual intensity of forms and the busyness of activities, and between the exposure of forms and the importance of activities. Predictions were also made about the effects of various personal characteristics such as social class, sex, familiarity, travel mode and place of residence, on the extent and complexity of environmental knowledge. A number of physical form and activity attributes of central Boston were surveyed, coded and mapped to see how and where they were related. An interview was conducted to find out what a controlled sample of people knew about the form and activity of the area. The interview subjects responded to the questions by filling in large base maps, and their responses were coded graphically, using the same format as that of the surveys. The parallel forms facilitated identification of the environmental factors that influence individuals' knowledge of the area. The effects of the controlled personal variables were analyzed by subsample comparisons.

Major Findings. A major determinant of whether or not a place was meaningful was the personal experience of the subject, and the more direct and frequent the experience, the more meaningful the place. Aside from expediting the acquisition of meanings, the principal role of congruence was that its absence acted to prevent a place from being known. The environmental characteristics, and particularly the exposure to pedestrians of information about the activity attributes of places, were also important determinants of personal knowledge. The differences controlled for in the research sample were not found to significantly influence the extent of the patterns of meaningful places, though they did somewhat influence their complexity. It was concluded that by the design of the environment itself--through the spatial organization of activities and the establishment of a congruent and expressive system of forms--the city designer can significantly influence the achievement of a more meaningful environment. (CS)

86. COMPARATIVE STUDY OF UNIVERSITY EXTENSION: THE URBAN EXTENSION MODEL

Main Investigator: Vernon P. Deines.

Status of Research and Publications: In process. Preliminary survey of literature and formulation of research methodology reported in V. P. Deines, A Comparative Study of Extension with a Formulation of an Urban Extension Model, Seminar on Higher Education Administration, University of Pittsburgh, April, 1966.

Agency: Kansas State University, Center for Community Planning Services.

Previous Digest Report: None.

Research Problem. To delineate the interrelationships of urban studies, research education, and extension in universities. The diversity of types of urban extension centers, as well as the many programs in urban extension, indicate the need for a study of organizational structure and functions in urban extension.

Previous Relevant Research. A general classification of types of urban studies centers (Urban Studies Center - Rutgers); a formulation of an operational definition of urban extension (Urban Studies Center - Rutgers, Petshek, Wisconsin, and Ford Foundation); and descriptive analysis of urban extension programs, functions, agents, values and goals (Bebout - Rutgers, and Ford Foundation), as well as numerous case studies of urban extension activities. In addition to publication cited above, the investigator formulated a model of higher education extension, reported in Higher Education. An Instrument of Change in the Urbanization Process, Seminar on Urban Analysis, University of Pittsburgh, May, 1966.

Method of Study. Development of measures (analogous scales), derivation of hypotheses from a theoretical framework (a model), and formulation of definitions (universals), especially operational definitions (i.e. what I mean is). A model of urban extension will be developed that can be submitted to the critique of a "jury" of experts for evaluation and modification. The urban extension model will then be utilized to conduct comparative studies of existing urban university extension centers to test its validity. (VPD)

87. REGIONAL DELINEATION FOR KANSAS

Main Investigators: George Nez and Charles Geiger.

Status of Research and Publications: Completed. Findings published in Regional Delineation for Kansas, Kansas Department of Economic Development, Planning Division Report No. 5B, July, 1966.

Agency: Kansas State University, Center for Community Planning Services, under sponsorship of Kansas Department of Economic Development, and the U. S. Department of Housing and Urban Development.

Previous Digest Report: None.

Research Problem. To provide statistical regions for analysis purposes, planning regions within which state-wide planning may proceed, political regions within which various state and federal governmental agencies may conduct the dialogue with local governments necessary to assure proper recognition of the needs of the citizenry, and administrative areas of various governmental programs.

Hypothesis. Because the coordination and communication between local government and the state or federal levels on matters of planning and development was inconsistent, there was an urgent need to delineate "regions" for the systematic orientation of surveys and plans in the state planning program.

Method of Study. More than 50 factors of the economy, social conditions, public facilities and operative field functions of transportation, utilities, industries, and branches of government were studied to determine the most appropriate pattern of regions. The procedure of the study included selection and combination of core factor indicating maps, selection and combination of boundary indicating maps, "squaring off" of regional boundaries, reviewing core areas for selection of sub-regions and selecting boundaries of sub-regions. A combined mapping and computerizing program was utilized to combine and correlate the areal data. A coding procedure was used to permit direct retrieval of area data.

Major Findings. Eleven multi-county regions and 23 sub-regions were delineated on the basis of a high proportion of coincidence of the factor boundaries. These factor boundaries were adjusted to the nearest county line. The regions are thus areas that are as homogeneous in character as can be selected. The specific rationale of the Kansas regions is visualized as: meaningful for local economies, logical areas of coordination for state and federal aid, logical for intergovernmental participation of counties and cities meaningful statistical reporting blocks, significant for promotion of industrial agglomeration, and permissive for concentrated remedial programs for pressing problems. (VPD)

88. IMPROVEMENT OF THE ACCOUNTING AND ECONOMIC ASPECTS OF TRANSIT MANAGEMENT.

Main Investigator: Michael Blurton.

Status of Research and Publications: In process.

Agency: Kent State University, under sponsorship of U. S. Department of Housing and Urban Development.

Previous Digest Report: None.

Research Problem. Use of modern management tools to manipulate standardized financial and operational data generated within transit systems, to be useful to transit management and other planners in short-run and long-run decision making.

Method of Study. The work will be carried out in consultation with selected transit systems. Existing accounting and statistical procedures will be analyzed. A basic standardization will be developed. Electro-mechanical means of collecting passenger statistical data, at present only obtained with difficulty, will be developed and tested. A basic computer program will be written which can either be used on a local computer or on the network of, for example, the Service Bureau Corporation. The entire program will be implemented on one transit system for testing purposes. (EM)

89. STRATEGIES FOR SHAPING MODEL CITIES

Main Investigators: Peter C. Labovitz, Harry G. Foden, Jay Ostrower, Ruth V. Holley, and others.

Status of Research and Publications: Completed and published March, 1967, under the above title as part of the "Critical Issues in Urban Management" series. For information contact Kathleen Manion, Arthur D. Little, Inc., 25 Acorn Park, Cambridge, Massachusetts 02140.

Agency: Arthur D. Little, Inc.

Previous Digest Report: None.

Research Problem. To help cities develop strategies and management capabilities for dealing with the problems and challenges the Model Cities Program presents. The Demonstration Cities Act, passed November 3, 1966, differs from previous renewal legislation. It places in the hands of city officials the primary responsibility for developing and implementing plans, and for coordinating the actions of a variety of city agencies and neighborhood groups. Usually, the federal government provides guidance manuals. The Act is already having significant impact.

Major Findings. In a number of cities, the problems of planning a program application have brought together city agencies that have never before met together. It is also evident that new groups of citizens and private firms are being brought into the development effort. Another distinguishing characteristic of the Act is the comprehensiveness of the proposed effort. In addition to rebuilding and revitalizing blighted areas, the program calls for coordinated social and economic action to expand job opportunities, reduce dependency on welfare payments, improve educational and cultural opportunities, combat disease and ill health, and reduce crime and delinquency.

While the program encourages the development and application of imaginative new planning techniques, organizational arrangements, and program tools, it is, at the same time, posing political and administrative problems that the cities have never before faced. Few cities have staff personnel experienced in planning social programs or in coordinating the many agencies that must be involved. The program will create administrative problems at the federal level as well.

The report urges cities to be idealistic in purpose, yet pragmatic in approach. It recommends that they set up specific and attainable objectives, and that they protect themselves by building flexibility into their programs, so they can avoid the situation where the validity of a single project or assumption could determine the success or failure of the entire program. To make the best possible use of opportunities created by the program, the report

suggests that cities focus their human and physical development efforts on certain key problems such as increasing employment opportunities, meeting the needs of new migrants to the city, or providing assistance to families displaced by highways or other projects.

The study notes that residents of blighted areas often have considerable pent-up energy which can be channeled constructively if they understand that the program is expressly for their benefit. The report suggests that neighborhood representatives conduct interviews in their own areas and collect the detailed information on conditions and attitudes that is essential for good planning. It also proposes that, subject to certain limitations, neighborhood groups be granted total control over project plans that have only limited impact beyond the neighborhood itself.

To get the perspective necessary to administer the program properly, the report suggests that city officials adopt a "total systems" point of view. No one aspect of the city--its housing, transportation, economic and social development, or urban design--can be considered in isolation. A number of comprehensive diagrams illustrating interrelated factors that produce continuing poverty and deterioration in city neighborhoods and describing ways in which program tools can operate to change these relationships are included in the report. (KM)

90. AIRPORT LAND NEEDS

Main Investigators: Warren H. Deem and John S. Reed.

Status of Research and Publications: Completed and published January, 1967, under above title as part of the "Critical Issues in Urban Management" series. For information contact W. D. Hirst or Kathleen Manion, Arthur D. Little, Inc., 25 Acorn Park, Cambridge, Massachusetts 02140.

Agency: Arthur D. Little, Inc.

Previous Digest Report: None.

Research Problem. To study the problems associated with airport planning in metropolitan areas and offer recommendation for their solution in the light of anticipated airport land needs from 1966 to 1975.

Method of Study. A survey was made of airport land needs by contacting airport managers, city planners, and Chambers of Commerce in all metropolitan areas of more than 250,000 population in 1960, or which had an airport with 100,000 or more emplanements in 1963.

Major Findings. Critical problems caused by mounting aircraft noise levels, runway extensions, rising land prices, increasing passenger and freight traffic, and terminal congestion are accentuating the need for more advance planning and land acquisition programs for metropolitan-area airports.

Aviation activity will continue to experience a rapid rate of growth from 1966 to 1975, when the volume of traffic is expected to double. A financial outlay in excess of \$75 million will be needed to acquire more than 100 square miles of land in 59 metropolitan areas for at least seven new major airports and for expansion of many existing ones. This estimate encompasses only one quarter of the metropolitan areas in the country. Acquisition of suitable, well-located land is going to become even more difficult and expensive during the next decade. Due to the difficulty of obtaining sufficient reasonably priced open land, new and relocated major airports are being built farther from central cities. To link new airports with central cities and the rest of metropolitan areas, new highways, some form of mass transit and helicopter service will generally be needed.

Not only have land prices been increasing at a rate of seven to thirty per cent a year, but the amount of land needed for airports has also been increasing. The larger, faster jets which are coming into service will again place heavy demands on available facilities. Increased passenger capacity of future planes means that peak-hour passenger traffic at airports is likely to be increased. Terminal facilities at airports will have to be expanded to accommodate more passengers and larger cargo loads. Access highways may have to be enlarged or some form of mass transit provided to airports.

Advance acquisition of airport sites is needed to obtain better-located airports at the lowest possible cost and to coordinate public improvements. However, advance acquisition requires more effective measures than merely local zoning or metropolitan planning. The simplest method is to purchase sites in advance of actual development. In the interim, the site may be leased or parts that will not be used for the airport proper resold with deed restrictions. These may limit the activities which can be located on parts of the site; prevent later noise suits; prohibit structures from being constructed; or permit any temporary land use of the land which must revert to acreage at a specified date. A similar approach would be simply to purchase easements in a future site. These might restrict or prevent development. An important advantage of advance acquisition of land or easements is that well-located sites may be obtained at relatively low cost. Also, other facilities such as highways, mass transit, and buffer zones can be planned more confidently to serve the future airport. (WDH)

91. GOVERNMENTAL ALTERNATIVES FACING THE CHICAGO METROPOLITAN AREA

Main Investigator: Joseph F. Small.

Status of Research and Publications: Completed and published October, 1966, under the above title as study No. 6, by the Center for Research in Urban Government, Loyola University, Chicago, Illinois. \$1.00 per copy.

Agency: Loyola University, Center for Research in Urban Government.

Previous Digest Report: None.

Research Problem. Study and evaluate alternative methods of government that might be used to solve the urban problems of the greater Chicago Area.

Major Findings. The study evaluates the many different governmental alternatives put forth, and offers these checkpoints as a guideline for whatever plan is adopted: (1) Frustration and disappointment throughout the country over the past decade underline the basic demand for citizen participation and local controls. The demand for citizen participation indicates the need for both a broadly based educational program as well as bipartisan political support for any proposed changes. Insistence on local controls indicates that any area-wide policy-making body will have to be established in a way that will assure the local municipality equitable representation in all plans for the area. (2) No one-step solution for government in the six-county area is visible. State legislation in 1965 permitting municipalities to enter into broad contractual agreements with one another is an important step, but more permissive legislation is called for to allow further experimentation in the reorganization of governments. (3) As the area struggles towards solutions some central clearing house and catalyst is needed. The Northeastern Illinois Planning Commission should be strengthened by means of an assured budget and an increase in staff and facilities. (4) Paralleling the work of a planning commission should be continuous research in a number of urban problem areas: transportation, revenue, school boards, wholesale and retail business patterns, government reorganization. This research should be independent of any political or social partisanship. It should be produced in both technical and popular formats in order to inform area-wide residents as thoroughly as possible. It should be designed to recommend policies growing out of our nation-wide experience. (5) In an area of experimentation the voluntary intercommunity councils should aggressively explore improved ways of providing services and should arrange for continuing exchange of information throughout the metropolitan area. (6) Finally, whatever is proposed should pass the test of political feasibility. Chicago and its surrounding suburbs represent a maze of political power bases, and any successful proposals for the area must accurately assess the cost to local political forces. The motivations and value systems of both the public servant and the citizen must be understood if the all-important support of these elements is to be achieved. (JFS)

92. STUDY OF AIR POLLUTANTS BY ABSORPTION SPECTROSCOPY

Main Investigator: Carl E. Moore.

Status of Research and Publications: In process.

Agency: Loyola University, Department of Chemistry, under sponsorship of U. S. Department of Health, Education, and Welfare, Public Health Service.

Previous Digest Report: None.

Research Problem. (1) Adapt the methods of Atomic Absorption Spectroscopy (a new, relatively inexpensive tool which is simple to operate) to the determination of air pollutants; (2) develop analytical methods suited to the various matrices encountered in the various geographical areas of great air pollution; (3) develop clearly defined analytical techniques of applying atomic absorption methods so these techniques can be used by the average technician; (4) apply the methods of atomic absorption in the determination of the following metals: beryllium, bismuth, cadmium, cobalt, antimony, chromium, molybdenum, titanium, nickel, vanadium, tin, manganese, copper, iron, lead, and zinc; (5) detect and determine these metals in the particulate pollutants collected in the Chicago Metropolitan Area. (CEM)

93. EXPERIMENTAL BUS LINES IN METROPOLITAN NASHVILLE

Main Investigators: Oscar Siegrist, George Cate, Sr., Carmack Cochran, Harvel W. Williams, Farris A. Deep, Irving Hand, Robert H. Paslay, Ora R. Adams, Gordon L. Mellencamp, David M. Mann, Joseph S Chronister, C. Dwight Hixon, Jack C. Marcellis, and others.

Status of Research and Publications: A Mass Transportation Demonstration Project commenced June, 1963, and concluded October, 1965. Final report issued fall of 1966 and available from Metropolitan Planning Commission, Nashville, Tennessee.

Agency: Metropolitan Planning Commission, Metropolitan Traffic and Parking Commission, Nashville Transit Company, under sponsorship of Metropolitan Transit Authority, Metropolitan Government of Nashville and Davidson County, Tennessee, and U. S. Department of Housing and Urban Development.

Previous Digest Report: None.

Research Problem. To study the attitudes of patrons toward certain unique experimental bus lines, operated within the urban area, and to develop a basis for predicting probable results of similar lines by relating certain observed land use, social, and economic characteristics of the areas served to such experimental bus lines. An additional study purpose was to demonstrate a more complete integration of transit services and to reveal how the experimental lines either complimented or detracted from the overall network of transit lines.

Method of Study. Two types of interview surveys were utilized in identifying the characteristics of those served by the experimental bus lines. (1) the Household Survey established the prevailing socio-economic characteristics of households and travel habits; (2) the On Bus Survey developed socio-economic characteristics of riders, the origin and destination of riders, and other trip information. Both surveys utilized random sampling techniques. A modified Program Evaluation and Review Technique (PERT) was

used for the correlation of data and its analysis. For the two-year program each project step was identified and given starting and completion dates as well as an estimated amount of funds for the step completion. The PERT diagram was maintained as a scheduling and monitoring device, producing economies which permitted a more efficient use of project funds for additional surveys and reporting by the participating agencies.

Major Findings. (1) None of the demonstration lines achieved profitability. With the exception of one, all provided a service contribution to the overall transportation system. (2) A single demonstration line cannot be operated in isolation from the overall system. Each must be an integral part of the transit system and be compatible in terms of function, scheduling, and transferring. (3) The utility of interrelated local and express routes in the overall system was demonstrated. The local lines penetrated the low density residential areas and the express line provided rapid service to the Central Business District. (4) The level of ridership on any transit line can be viewed as how feasible it is as an alternative. Considering the major trip purposes, it appeared that people with less income travel longer and further by transit to places of employment than those with higher income. (5) The density of development of the service area has some influence on the level of transit ridership, but it can be in part offset by several factors including: the timing of transit service introduction and the development of the area served, the tie of the transit line to the overall system and the characteristic of the transit service. The relative success of the Hermitage Hills Extension Line can be in part attributed to the timing of transit services with the development of the area. The study reflected that on this line one trip was generated for every five residents. This compares to one trip for every fourteen or twenty residents on two other lines respectively. (6) A line must serve several purposes in order to attract sufficient ridership. For example, while specialized shopping was an important function of transit trips, it had to be combined with other functions to attract a sufficient level of patronage. (7) The greatest single purpose for the transit trips during the demonstration period was for travel to or from work. (8) Advertising appeared least significant in creating initial awareness of a project line. Seeing or hearing about it by word of mouth seemed to create a greater response. It appeared that the more formal means of advertising reached the economically advantaged, whereas, those with lesser resources responded to the more casual means. (JS)

94. OPERATIONAL ASPECTS OF ONE-WAY AND TWO-WAY STREETS

Main Investigator: H. H. Ferguson.

Status of Research and Publications: In process. Traffic volume, turning-movement, speed and delay, and gap surveys have been completed to record the "before" conditions in the cities of Lansing, Kalamazoo, Pontiac, and Port Huron. Corresponding surveys to record the "after" conditions have been completed in Lansing and Kalamazoo. Accident data have also been compiled for the latter two cities. Analyses of

survey and accident data for these two cities are continuing. An interim report, based on findings in Lansing and Kalamazoo, scheduled for June, 1967. Completion of final report scheduled for end of 1969.

Agency: State of Michigan, Department of State Highways, under sponsorship of U. S. Bureau of Public Roads.

Previous Digest Report: 12:2-54.

Research Problem. To measure quantitatively the type and degree of improved operation realized when a facility is changed from two-way operation to one-way operation. (HHF)

95. ADULT PROBATION LAWS OF THE 50 STATES

Main Investigator: W. A. Goldberg.

Status of Research and Publications: In process. Completion expected December, 1967. Publication expected but details not yet known.

Agency: Michigan State University, School of Police Administration and Public Safety.

Previous Digest Report: None.

Research Problem. Compile a summary of the statutes on adult probation in each of the 50 states and the United States, with major consideration accorded statutory citations, the supervising agency, method of appointment, and financing of the program; the restrictions against probation in the statute, the term, whether a pre-sentence investigation is mandatory or optional; the revocation process; conditions mandatory and optional in the statute; any unusual provisions in the law as to hearings, expunging of record, etc. These findings will be compared with the last previous compilation, made in 1940, and with the "model" acts of various groups. Apparent trends for adult probation law and practice will be noted. (WAG)

96. MINNEAPOLIS WATER WORKS PROJECT PROGRAM

Main Investigators: T. B. Corlett, Jr., Clayton M. Bach, Melvin E. Enquist, Everett J. I. Paulson, George R. Lundell, and Charles Taflin.

Status of Research and Publications: Commenced October, 1957. Completion scheduled for 1975.

Agency: City of Minneapolis, Minneapolis Water Works

Previous Digest Report: None.

Research Problem. Conduct the research necessary to accomplish the following: (1) centralized control of the plant operation in the Fridley area; (2) expansion of the water works plant capacities to provide adequate

facilities to handle all existing demands and to meet future City of Minneapolis needs and contracted obligations; (3) provision for further expansion to allow for double the present capacity if need should arise; (4) chemical recovery so the water works can be self-sufficient in most chemicals and reduce waste disposal problems and river pollution; (5) cost reductions which will provide adequate funds to pay for this program (although bond funds will still be necessary to provide adequate funds at time of peak expenditure); (6) reinforcement of the distribution system to meet the high demands placed upon it and to meet the recommendation of the National Board of Fire Underwriters Board. (TBC)

97. AN ANALYSIS OF COMMUNITY EXPENDITURE DIFFERENTIALS IN THE PROVISION OF PUBLIC SERVICES TO RURAL COMMUNITIES IN SOUTHWESTERN MINNESOTA

Main Investigators: Dean Tin Chen and Philip M. Raup.

Status of Research and Publications: Doctoral dissertation completed December, 1966. Findings, published as a Research Bulletin, available from Department of Agricultural Economics, University of Minnesota, St. Paul, Minnesota 55101.

Agency: University of Minnesota, Agricultural Experiment Station.

Previous Digest Report: 13:1-143.

Research Problem. Analyze expenditure patterns in ninety towns (all incorporated) in eleven counties in southwestern Minnesota to determine the relationships between key community factors (socio-economic characteristics) and local public expenditures.

Hypothesis. Manpower resources, wealth, and location of the individual community are the basic forces that condition and determine local public expenditure variations.

Method of Study. Two related factor analysis models were used to define and measure current patterns of community structure and supporting characteristics in terms of twenty-eight socio-economic variables. The key community factors which were extracted and demonstrated to be significant were then retested by factor analysis for degree of association with per capita and total operating expenditures under eight functional categories. The final phase of the study led to the generalizations of working hypothesis and confirmation of hypothesis by performing the multiple regression and correlation analysis.

Major Findings. Five community factors were found to be significant in explaining most of the local expenditure variations. Urbanizations, income-educational status, and property tax base are the factors of central importance. This study suggests the adjustment process in the public service sector is made in terms of population basis and financial resources. (DTC)

98. URBAN AEROSOL: COUNT-SIZE RELATED TO METEOROLOGIC DATA

Main Investigators: Harold J. Paulus and Carl M. Peterson.

Status of Research and Publications: In process.

Agency: University of Minnesota, School of Public Health, under sponsorship of U. S. Department of Health, Education, and Welfare, Public Health Service.

Previous Digest Report: None.

Research Problem. A study of the particle number and size distribution of the aerosol in a mixed industrial residential urban area.

Method of Study. Three continuously recording counters will be used: the Royco Particle Counter for the particle size range 0.3 to 10 microns and larger, the General Electric Condensation Nuclei Counter for the range 0.001 to 0.2 microns, and the recently developed Electrical Particle Counter for the range 0.01 to 0.6 microns. It is planned to count and size airborne particles at ground level and in samples drawn from 70, 170, and 550-foot elevations. The count-size data on airborne particles will be related to concentration determinations on high volume samples, to Coh values as determined by the smoke spot sampler and to various meteorologic data assembled from a tower installation and other sources. (HR)

99. THE NATURE AND SCOPE OF AGGLOMERATION EFFECTS OF CITY SIZE AND ADVANCED SCIENTIFIC TRAINING ON INDUSTRIAL RESEARCH LABORATORIES

Main Investigator: John C. Murdock

Status of Research and Publications: Completed and submitted for publication
A copy of report sent to the National Aeronautics and Space Administration.

Agency: University of Missouri, under sponsorship of National Aeronautics and Space Administration

Previous Digest Report: None.

Research Problem. To determine whether industrial research laboratories experience net external effects of agglomeration in association with variations in the size of city in which they are located or variations in the level of commitment of resources in the local economy to advance training in sciences. It was also possible to investigate something of the nature of these external effects and their sources

Previous Relevant Research. Previous research dealing with this topic is very limited, the closest being Wilbur Thompson, "Locational Differences in Inventive Effort and Their Determinants," The Rate and Direction of Inventive Activity, Richard Nelson, ed. (Princeton National Bureau of Economic Research, Princeton University Press, 1962)

Method of Study. The study involved a mail questionnaire survey of research laboratory directors from a stratified sample of industrial research laboratories in the United States. These data were then coupled with certain sources of secondary data and subjected to appropriate statistical tests.

Major Findings. The study showed that variations in city size produced over twice as many statistically significant evidences of external economies to the research laboratories as did variations in advanced scientific training in the local area. (JCM)

100. GROUND-WATER RESOURCES OF SUMMIT VALLEY AND UPPER SILVER BOW CREEK DRAINAGE AREA (MONTANA)

Main Investigator: Maxwell K. Botz.

Status of Research and Publications: In process.

Agency: Montana College of Mineral Science and Technology, Montana University, Joint Water Resources Research Center, and Montana State University, under sponsorship of U. S. Department of the Interior, Office of Water Resources Research.

Previous Digest Report: None.

Research Problem. Inventory and evaluate information regarding water problems of the Butte Metropolitan area. Residential and industrial growth around the perimeter of the city is placing additional water use pressures on individual wells and group well systems. These uncoordinated developments involve pollution problems including the effect of industrial waste. The research on this project is designed to produce a complete inventory of geology, hydrology, and water quality of the area. (MKB)

101. METHOD FOR MEASUREMENT OF COMMUNITY DISLOCATION SENSITIVITY AND ADJUSTMENT POTENTIAL

Main Investigators: Sidney Sonenblum, Mannie Kupinsky, and Leonora Howe.

Status of Research and Publications: Research completed and published as "Community Information System." For availability of report, contact Henry Wyner, Economics Bureau, U. S. Arms Control and Disarmament Agency, Washington, D. C.

Agency: National Planning Association, under sponsorship of U. S. Arms Control and Disarmament Agency.

Previous Digest Report: 13:1-148.

Research Problem. Using eleven standard metropolitan statistical areas as examples, the study attempts to select the most relevant economic indicators for measuring community sensitivity and adjustment potential in event of changes in defense expenditure levels. (MK)

102. METROPOLITAN ECONOMIC PROJECTIONS SERIES

Main Investigators: Sidney Sonenblum and Joe Won Lee.

Status of Research and Publications: Fourth publication, Economic and Demographic Projections for 224 Metropolitan Areas (3 Volumes), issued as Report No. 67-R-1, May, 1967. Publications available to subscribers of the Regional Economic Projections Series. Report No. 67-R-1 available separately.

Agency: National Planning Association (Washington, D. C.).

Previous Digest Reports: 10:2-57; 11:1-56; 11:2-72; 12:1-75; 12:2-65; 13:1-146. (MK)

103. REGIONAL ECONOMIC PROJECTIONS SERIES

Main Investigators: Sidney Sonenblum and Ahmad Al-Samarrie.

Status of Research and Publications: Publication with state projections completed and issued as Regional Economic Projections Series Report No. 65-II. Available to subscribers to the Regional Economic Projections Series.

Agency: National Planning Association (Washington, D. C.).

Previous Digest Reports: 9:2-87; 10:1-48; 10:2-59; 11:1-57; 11:2-73; 12:1-76; 12:2-64; 13:1-147. (MK)

104. UPPER MISSISSIPPI RIVER BASINS ECONOMIC BASE STUDY

Main Investigators: Sidney Sonenblum and others.

Status of Research and Publications: Final report completed.

Agency: National Planning Association (Washington, D. C.), under contract with U. S. Army Corps of Engineers, North Central Division.

Previous Digest Reports: 12:1-78; 12:2-62. (MK)

05. ECONOMIC AND DEMOGRAPHIC STUDY OF NEW YORK STATE

Main Investigators: Sidney Sonenblum, Manuel Helzner, David Bramhall, Philip Ritz, and Peter Wagner.

Status of Research and Publications. Preparatory research completed. Main study to begin shortly. Research programmed for a three-year period.

Agency: National Planning Association (Washington, D. C.)

Previous Digest Report: None.

Research Problem. To develop the economic and demographic information needed for state-wide planning. The major work elements are: (1) model formulation; (2) government studies; (3) industry studies; and (4) input-output projection program. (MK)

106. REORGANIZATION OF NEW HAMPSHIRE SCHOOL DISTRICTS

Main Investigator: H. C. Grinnell.

Status of Research and Publications: In process.

Agency: University of New Hampshire, Agricultural Experiment Station, under sponsorship of State of New Hampshire.

Previous Digest Report: None.

Research Problem. Develop a procedure for determining a feasible reorganization of New Hampshire school districts. This would involve: (1) determining the potential growth or decline of a representative region in terms of economic development as a basis for reorganization of the area for public school purposes; (2) determining and comparing the costs for different patterns of reorganizing public education within an area; (3) establishing procedure for accruing and analyzing information necessary for local decision making with respect to reorganization of school districts.

Method of Study. Determine why former efforts for organizing a cooperative school district have failed. Examine transportation routes and costs for both public and private ownership of buses. Examine trends in population, taxable wealth, and number of pupils. Examine tax burdens of existing cooperative districts before and after reorganization. The investigator favors a system which will allocate greater state aid to poor districts after reorganization (HR)

107. SYNTHETIC HYDROLOGY

Main Investigator: Warren Viessman, Jr.

Status of Research and Publications: In process.

Agency: New Mexico State University, Department of Civil Engineering, under sponsorship of U. S. Department of the Interior, Office of Water Resources Research.

Previous Digest Report: None.

Research Problem. To develop reliable procedures for predicting the complete runoff hydrograph on the basis of a knowledge of the rainfall pattern and drainage area characteristics.

Method of Study. Data used are derived from 15 small urban catchment areas. One-minute rainfall inputs will be used to generate a sequence of runoff outputs which can be synthesized into the total runoff hydrograph. (WV)

108. EVALUATION OF TEAM TEACHING IN THE ELEMENTARY SCHOOLS

Main Investigators: Samuel D. McClelland, Catherine Urell, and Julia Martin.

Status of Research and Publications: Completed.

Agency: City of New York, Board of Education, Office of Educational Research.

Previous Digest Report: None.

Research Problem. To evaluate team teaching in the elementary schools. The team teaching method of instruction was initiated in 76 of New York City's elementary schools in 1965-66. In this method, teams of three to seven teachers plan together. Teachers with special competence in a special area assume leadership for the area. Classes are flexibly organized into large and small groups. Teachers cooperate to adapt the curriculum and to improve teaching methods. When team teaching had been established in 47 schools, it became necessary to evaluate team teaching as a basis for decisions concerning the extension or curtailment of the method

Method of Study. Evaluation covered the school year of 1963-64 (1) Academic achievement was tested by Sequential Tests of Educational Progress Initial and Final; (2) nature of the teaching process was studied by classroom observation; (3) pupil anxiety was tested by the Taylor Manifest Anxiety Scale for Children; (4) reactions of teachers, principals, parents, and students were determined by use of a questionnaire.

Major Findings. Standardized achievement tests did not establish a statistically significant superiority for the experimental classes, but it must be borne in mind that such achievement tests are not perfectly relevant to the specific curriculum, and that only eight months of instruction occurred between the initial and final tests. Repeated observations made it clear that the type of activity which took place in the large group in team teaching differed significantly from the action in the self-contained class. In large groups, there was more dramatization, singing, and watching-and-listening. There was less discussion, research, and pupil questioning. Projectors were often used, but books and blackboards were not. However, the large group more often used unusual materials of instruction. The self-contained class produced significantly greater teacher-pupil interaction, but the opposite was observed for pupil-pupil interaction. The physical facilities for large group instruction were generally unsuitable.

As far as can be determined, team teaching does not produce pupil anxiety. In the special areas of art and music, careful observation and investigation resulted in a strong endorsement of team teaching as a source

of improvement in these curricula. While there were recommendations for changes and improvements in specific features of the program, all participants were generally very favorable. Teachers and principals were agreed on the value of team teacher planning and the use of teacher specialists. Both deplored the limitations resulting from lack of time for planning and inadequate physical activities. Concern was also expressed that large group instruction might cut down on time needed for teaching basic skills appropriately. (SDMcC)

109. EVALUATION OF THE REMEDIAL READING PROGRAM IN AFTER-SCHOOL STUDY CENTERS

Main Investigators: George Forlano, J. Wayne Wrightstone, and Jack Abramson.

Status of Research and Publications: Completed.

Agency: City of New York, Board of Education, Office of Educational Research.

Previous Digest Report: None.

Research Problem. To evaluate the remedial reading program in after-school study centers. The after-school study center program is one of the steps taken by the Board of Education of the City of New York to compensate, as far as possible and within the operation of a school system, for the lack of maximum opportunity to learn academic skills as these are influenced by social and economic conditions. To compensate in part for lack of maximum opportunities on the part of disadvantaged pupils, educational remedial services especially in reading, were provided after the regular school day program for a maximum of two hours, three days a week, over most of one school year. In an attempt to raise the reading level of the participating pupils, personnel, space, materials, and incentive for learning were provided.

Method of Study. The evaluation was among third and fourth grade pupils, and covered the school year 1964-65. An experimental-control design utilizing equated pairs of pupils was employed. Along with the experimental pupils two types of control pupils served as subjects. The first group of control pupils was drawn from pupils who were in the same school as the experimentals; the second control group was composed of pupils enrolled in schools which did not have after-school study programs. The Metropolitan Reading Achievement Test-Reading Comprehension was administered in April, 1964, and another form of the test in April, 1965. The pupils were matched on initial reading score, grade, and sex. The first group of experimentals and controls contained 1,521 pairs; the second group 427 pairs.

Major Findings. (1) In general, the effect of enrollment in the remedial program in reading on the participating fourth grade pupils showed a greater growth in reading compared to the growth of the pupils who were not enrolled. The experimental pupils as a group gained about 27 to 32 per cent more than the control pupils. (2) Largest gains were observed for the subgroup of experimental pupils who were most retarded in reading and who attended more regularly. (3) A positive relationship appeared between the amount of attendance in the instructional sessions and growth in reading achievement. (4) These findings are applicable to fourth grade pupils who score at grade level or below at initial test time in the third grade. Further research at other grade levels is indicated. (GF)

110. EVALUATION OF THE COMMUNITY ZONING PROGRAM

Main Investigators: J. Wayne Wrightstone, Samuel D. McClelland, and George Forlano.

Status of Research and Publications: Completed.

Agency: City of New York, Board of Education, Office of Educational Research

Previous Digest Report: None.

Research Problem. To evaluate the community zoning program. The program was put into effect in New York City in September, 1964. The plan provided that the eight selected elementary schools should be paired in the interests of achieving ethnic balance. Thus, a school enrolling predominantly Negro and Puerto Rican pupils would be paired with a school enrolling predominantly Other White children. In addition to achieving ethnic balance, the program was intended to further quality education. In an attempt to achieve these objectives, the schools were provided with smaller than average class sizes, lower pupil teacher ratios, more professional and non-professional personnel, and additional allowances for supplies and equipment after the plan went into effect.

Method of Study. The evaluation covered the school years 1964-65 and 1965-66. Several approaches were utilized in appraising the program in the four pairs of schools. (1) The ethnic composition of pupils and pupil attendance over the period studied were surveyed through examination and analysis of official pupil accounting records. (2) The mobility and discharge rates of the pupils after entrance into the program were surveyed by analysis of official pupil mobility data in each school. (3) Pupil growth in reading and arithmetic were measured by application of standardized tests on an initial and final test basis over specified time intervals. (4) Pupil improvement in social attitudes and behavior were assessed by systematic observations, sociometric scales, and teacher ratings. (5) Teacher attitude toward the program was determined by teacher attitude scales given initially and finally. (6) Reactions of supervisors to the program were determined by administration of questionnaires.

Major Findings. (1) A more favorable ethnic balance was achieved in the eight zoned schools as a result of the school pairings. (2) During both years studied, the upward and downward changes in attendance rates were on the order of two per cent or less. (3) Pupil discharges to parochial and private independent schools and to schools outside New York City were disproportionately Other. The pupil discharge rate for all schools combined for both years was generally above expected city-wide figures. However, there is not yet any clear indication of the nature or extent of the impact of school pairing upon pupil mobility. (4) The predominant finding resulting from the analysis of standardized test results is that nearly all pupil groups and subgroups improved in standing in relation to national norms from initial to final tests. No control groups were used. (5) The results

of the observations showed that there was evidence of personal-social integration among ethnic groups in the classes with no functional awareness of ethnic differences. (6) Teacher reaction was found to be mixed. The majority felt that the money could be better spent on reducing class size in neighborhood elementary schools. (7) When interviewed, administrators reported many advantages and some problems resulting from the program. The full effects of such a major change in organization and methods can only become evident after a considerable extent of time. The findings obtained over two years must be regarded as tentative. (JWW)

111. NEIGHBORHOOD CONSERVATION IN NEW YORK CITY

Main Investigators: Hortense Gabel, Harry C. Harris, and others.

Status of Research and Publications: An Urban Renewal Demonstration Project completed. Report issued under the above title October, 1966, by the Housing and Redevelopment Board, City of New York, New York.

Agency: The City of New York, Housing and Redevelopment Board, under sponsorship of U. S. Department of Housing and Urban Development.

Previous Digest Report: None.

Research Problem. To develop and test techniques for the prevention of blight in neighborhoods that are not appropriate for either slum clearance or complete remodeling; develop community-directed ongoing neighborhood improvement programs.

Method of Study. New York City's Neighborhood Conservation Program was launched in the fall of 1959 as an attempt to halt and reverse housing deterioration and meet and ameliorate social problems affecting essentially sound though troubled neighborhoods. The project was designed for "grey" areas--communities which neither needed nor wanted assisted urban renewal treatment, but required housing and social improvements to redress adverse trends and promote sound family life in what could become stable and vital neighborhoods.

Between 1959 and 1961, seven Manhattan neighborhoods were chosen for the experiment: Chelsea, Bloomingdale, East Harlem, Carnegie Hill, Morningside, Hamilton-Grange, and Hudson. Containing over 45,000 dwelling units housing nearly 100,000 people, the areas diverged in many respects but had a number of common characteristics and problems. All had a prevalence of high rise, rent controlled, non-owner occupied, multiple dwellings. Though varying, approximately 80 per cent of the housing stock of the districts was sound, with about 15 per cent classified as deteriorating and 5 per cent rated as dilapidated. Essentially middle-class communities, each had a fairly new and significant proportion of low income residents, many of whom were recent in-migrants from the South or Puerto Rico. As the fifties drew to a close, the neighborhoods were confronted with the deleterious effects on existing

housing of age, the elements, mismanagement, neglect, and economic exploitation. Police and security problems were in evidence. Many middle-class families began the flight to suburbia, thereby compounding various adverse trends.

The program was carried out with the cooperation of the City and the leaders and residents of the neighborhoods which were to be served by the program. In general, these techniques were used: (1) Strict and intensive enforcement of the housing, building, health and sanitation codes through coordination of the inspectional services of City departments. (2) Encouragement of building upgrading and moderate rehabilitation by advising property owners and assisting them to utilize various financing aids such as municipal loans, government-sponsored mortgages, tax abatement and exemption. (3) Decongestion of the neighborhood by assisting families to relocate to better housing. (4) Tenant organization, education, and assistance with emphasis on self-help. (5) Activities to clean up and beautify the neighborhood with community cooperation. (6) Identification of community needs in health, welfare, police protection, intergroup relations, recreation, and education. (7) Building of community organization for citizen participation in joint efforts to expand services where needed and to plan for the future of the neighborhood.

Major Findings. Several of the areas (Chelsea, Bloomingdale, Morningside) have been saved from becoming slums and have become desirable neighborhoods in which to live. The program has proved useful in supplementing urban renewal programs and in conserving both human and property values. This program can be utilized to save essentially sound though troubled neighborhoods, thereby postponing redevelopment for more than a decade and making renewal far less extensive and expensive at that time than would be the case in the absence of the program. The human values that can be saved through application of the program's techniques in appropriate neighborhoods is incalculable, as are the monetary savings. Moreover, this can be done not only with a relatively small expenditure but at an actual profit to the City. Perhaps more important, Neighborhood Conservation has documented the need as well as the wisdom of localizing municipal services. Clearly, the intensification and coordination of the efforts of public and private agencies has brought residents and officials closer together; canalized previous discontent into productive and meaningful activities; and provided neighborhoods with much more effective, efficient, and humane government. Economically feasible, politically attractive, and socially sound, New York City's Neighborhood Conservation Program should be continued and systematically extended to every neighborhood in the City where the application of its techniques is justified on objective grounds.

A detailed account of the background, procedure, findings, and recommendations are given in the illustrated report noted above. Since the program, although formally begun in 1959, had its genesis at least four years earlier, the report covers the period from 1955 to July, 1964

(15)

112. PREVENTION AND CONTROL OF JUVENILE DELINQUENCY IN MIDDLE AND UPPER INCOME SUBURBAN GROUPS

Main Investigator: Not reported.

Status of Research and Publications: Completion scheduled for 1967. For information, contact Anthony Romeo, Executive Director, Community Development for Youth, 26 W. Jericho Turnpike, Huntington Station, New York 11747.

Agency: Community Development for Youth (Huntington Station, New York); Suffolk County, New York; New York Police Department, Juvenile Aid Bureau; Probation Department, Suffolk County; Municipal Courts, Huntington Township; Suffolk County Courts; Student Adjustment Center, Board of Cooperative Education Services, Huntington Township; Family Service League, Inc., Suffolk County.

Previous Digest Report: None.

Research Problem. A demonstration project to develop procedures for reducing the incidence of delinquent behavior by treating, preventing, and controlling the delinquent activities of young people between the ages of fourteen and seventeen, who come from middle and/or high income homes.

Method of Study. (1) Test the feasibility of involving middle class and/or upper-class youth and their parents in a delinquency treatment, prevention, and control project which utilizes a modified version of group therapy technique; (2) measure behavioral changes that might occur in the youth and their parents as a result of their participation in the program; (3) record, collect, analyze, evaluate and report information relating to middle and high income suburban juvenile delinquent behavior; (4) utilize statements from the youth as to why they did what they did and explore what actually are the motivational circumstances for their behavior; (5) identify recurrent patterns of delinquent behavior, since they might be useful in understanding and planning other programs of delinquency treatment, prevention, and control by the subject community and other similarly structured communities (6) establish better and more meaningful communication between those agencies presently dealing with delinquent youth in the community, between parents and their adolescent offspring, and between these adolescents and the interested agencies in the community; (7) demonstrate that increased youth services result in financial savings to the community by reducing the incidence of delinquent behavior. (HR)

113. PROJECT TRUE (TEACHER RESOURCES FOR URBAN EDUCATION)

Main Investigator: Marjorie B. Smiley.

Status of Research and Publications: Commenced in 1962 and scheduled for completion August, 1967. The following materials have been completed and are available through the publishers indicated: (1) Harry L. Miller and Marjorie B. Smiley, Education and the Metropolis. Selected

readings on the social forces affecting the education of children in underprivileged, urban environments; presently published by the Free Press (Macmillan), in two volumes: Education and the Inner-City School, January, 1967, and Policy Issues in the Inner-City School, March, 1967. (2) Estell S. Fuchs, Pickets at the Gates: A Problem in Administration, and School Boycott: Learning in the Streets. Two case studies of school boycotts. Free Press (Macmillan), in one volume--Hardcover, \$5.95 per copy; paperback, \$2.95 per copy. (3) Joan I. Roberts, School Children in the Urban Slum: Readings in Social Psychology for Teachers. Research selections from anthropology, psychology, and sociology, with integrating introductions to sections dealing with the child both cognitively and emotionally, and the family and school, or groups that affect him. Free Press (Macmillan), March, 1967. Price approximately \$9.00 per copy. (4) Elizabeth M. Eddy, Urban Education and the Child of the Slum. Observations made in five elementary and four junior high schools, in areas with a high concentration of low-income Negroes and Puerto Ricans. The role of the slum school in American culture, and the school itself as a generating milieu of culture, are the primary perspectives from which the data are analyzed. Published in paperback, entitled Walk the White Line: A Profile of Urban Education (Doubleday Anchor Series). Price approximately \$1.25 per copy. (5) Helen Randolph, Urban Education and Urban Education: Supplement I. An annotated bibliography for college and school personnel responsible for preparing teachers to serve in depressed, urban area schools, and the addenda to this bibliography. Revised and updated by, and available from, the Center for Urban Education, 33 West 42nd Street, New York, New York. (6) G. Alexander Moore, Jr., Urban School Days. Selected descriptions and commentary on teachers at work in depressed, urban area schools; available in paperback, under the title Realities of the Urban Classroom: Observations in Elementary Schools (Doubleday Anchor Series). Price approximately \$.95 per copy.

Also available are audiotapes of beginning elementary teachers. Prices are \$2.50 or \$5.00. A preview tape describing the background of the series and containing excerpts from each is available. Also, 16mm kinescopes produced from videotapes of elementary and secondary school classes are available for rental through the Audio-Visual Center, Hunter College, 695 Park Avenue, New York, New York 10021. Lists of audiotape and kinescopes available upon request.

Agency: City University of New York, Hunter College, Department of Education, under sponsorship of U. S. Department of Health, Education, and Welfare, U. S. Office of Juvenile Delinquency and Youth Development

Previous Digest Report: None.

Research Problem. To develop curricula materials and methods to improve the preparation and in-service education of teachers and school administrators serving children and youth in depressed urban area schools

Method of Study. Original data have been gathered by observation teams in selected elementary and junior high, inner-city schools, by informant interviews covering a semester each with beginning teachers in elementary and junior high schools, and interviews with children, parents, teachers, and administrators. Several elementary and secondary school classes have been recorded on videotape. Future plans include taping more classes.

Based on these data, a number of instructional materials have been completed. Additional materials are currently being prepared. As they become available these materials are used and evaluated in selected teacher preparation courses at Hunter College and elsewhere. The materials are also circulated to specialists in the field and their comments and suggestions for revision are solicited. After one year of evaluation, these materials are then made available for commercial publication.

Project TRUE has conducted several institutes for Hunter College Department of Education faculty as well and has sponsored two seminars on urban education involving representatives from the college faculty, inner-city schools, and the community. It has recently concluded a faculty seminar on anthropology and education. (NB)

114. EAST COAST SNOW FORECASTING TECHNIQUES

Main Investigator: Jerome Spar.

Status of Research and Publications: In process.

Agency: New York University, Department of Meteorology and Oceanography, under sponsorship of U. S. Department of Commerce, Environmental Sciences Services Administration.

Previous Digest Report: None.

Research Problem. To develop techniques for estimating the probability of snow in the urban and surrounding commuter areas of the densely populated northeastern region of the United States. These techniques will be for short period localized forecasting of the probability of snow occurrence, the amount of snowfall, and the demarcation between rain and snow along the east coast of the United States. The cities, highways, and airways of the study area are exposed to potentially crippling and always dangerous snowstorms during the winter season. Not infrequently, snowstorms in large metropolitan centers bring traffic to a virtual halt, causing great personal hardships and enormous economic losses. Adequate forecasts of snowfall, including timing of occurrence, rate of fall, and total accumulation, would alleviate much of the hardship during these periods.

Method of Study. Initial effort will be devoted to extensive climatological, statistical, and synoptic analyses of past storms. Quantitative probabilistic forecasting techniques will be derived from these analytic data. Since forecast areas for individual cities are relatively small, it

will be necessary to examine the structure of the storms and their quantitative precipitation patterns on a sub-synoptic scale. Marine and orographic influences will be evaluated from the storm analyses. (HR)

115. STATE AND LOCAL FINANCE AND LOCATION OF ACTIVITY WITHIN URBAN AREAS

Main Investigators: Dick Netzer, Ralph Kaminsky, and Mark Haskell.

Status of Research and Publications: A three-year project commenced September, 1966.

Agency: New York University, Graduate School of Public Administration, under sponsorship of Ford Foundation

Previous Digest Report: None.

Research Problem. Study the relationship between state and local government tax and expenditure policies and the location of economic activity within urban areas. More specifically, investigate: (1) The relation between tax differentials and the location of both business activities and residences in a metropolitan context. (2) Local taxation and housing in urban areas, particularly in central cities. The United States shares with Canada and Britain the distinction of taxing housing more heavily than any other form of consumption (aside from liquor, tobacco, and gasoline). However, it is not known how this affects housing supply in general and the rebuilding of older cities in particular, nor, if the problem is a real one, are solutions known. (3) The levels and financing of central city public service "amenities," as they bear on the position of the central city relative to its metropolitan environs. Does the level of amenities make any difference in locational and developmental patterns? Does the way in which they are financed make a difference? How does this tie into the housing tax differentials? (4) The levels and financing of central city redistributive or "poverty-linked" services. The central cities are the home of the poor. In the light of changing metropolitan economic patterns, can research reveal the magnitude of this financing problem and discover ways in which to handle it better? (5) The impact of fiscal pressures on public land-use control policies. In some large metropolitan areas, local land-use planning designed to minimize local fiscal pressures has indeed been an observable practice in recent years. How important is it? Are there regional differences? Is it a passing problem, peculiar to the 1950's? (DN)

16. THE OLD CITIES PROJECT

Main Investigators: Dick Netzer, Ralph Kaminsky, and Katherine W. Strauss

Status of Research and Publications: Report to Regional Plan Association, Inc. scheduled for June, 1967. Use and publication of report to be determined by the New York Regional Plan Association, Inc.

Agency: New York University, Graduate School of Public Administration, under contract with the New York Regional Plan Association, Inc.

Previous Digest Report: 13:2-108

Research Problem. To identify strategic public service programs and recommend ways of financing them.

Hypothesis. Poverty-linked and education services weigh so heavily in the liveability and budgets of old cities that they deserve priority consideration.

Method of Study. Compare the region's old cities with other places in the region with respect to present and required programs and their capacity to finance such programs.

Major Findings. Old cities are lagging in the provision of poverty-linked and education services. These cities do not have the fiscal capacity to undertake significant expansions. Therefore, financing from higher levels of government will be required. Only then will old cities also have a reasonable chance of providing the other public services they will require. (RK)

117. METROPOLITAN COUNCILS OF GOVERNMENTS

Main Investigator: Joseph F. Zimmerman.

Status of Research and Publications: A continuing study in process. Findings reported in "Governmental Ecumenism: The Road to the Promised Land?" Journal of Urban Law, Spring, 1967. Reprints available.

Agency: State University of New York (Albany), Graduate School of Public Affairs.

Previous Digest Report: 13:1-152.

Research Problem. A study of the origin, development, and effectiveness of metropolitan councils of governments.

Major Findings. A metropolitan council of governments may act as a catalytic agent in developing area-wide programs and may develop into an adequate political system for governing the metropolis. However, as a mechanism for solving complex, area-wide problems, its potential is limited because decision making authority remains fractionated. The only agreement the council may be able to reach is likely to be a negative one: opposition to a major action proposal. The success of a metropolitan council of governments depends heavily upon local conditions and the support it receives from the federal and state governments. If the effort to solve pressing metropolitan service problems by means of federally aided metropolitan councils of governments is successful, the fragmented government of the metropolis probably will be perpetuated because reformers will then be deprived of some of their most compelling arguments. (JFZ)

118. DISCRETE FIELD ANALYSIS OF STRUCTURAL LATTICES

Main Investigator: Donald L. Dean.

Status of Research and Publications: In process.

Agency: University of North Carolina, Department of Civil Engineering, under sponsorship of National Science Foundation, Division of Engineering.

Previous Digest Report: None.

Research Problem. This project provides the basis for a broader concept of shelters and their role in environmental control, for example, the covering of entire urban sections. A theoretical study will be made of two- and three-dimensional structural lattices and ribbed shells through the application and extension of modern techniques of discrete field mechanics. The primary goal is to lay a practical foundation for the rational analysis and design of these increasingly popular systems to supplement and replace the empirical and experimental techniques currently in use.

Method of Study. (1) Derive tractable mathematical models (system of partial difference and difference-differential equations) for numerous and varied representative modern, as well as new and promising, structural systems in these categories; (2) write general closed form solutions, usually kernel functions, for the mathematical models for realistic boundary conditions; and (3) study the design possibilities through varying the lattice or rib patterns. (HR)

119. THE LOCAL HEALTH DEPARTMENT AS A WORK ORGANIZATION

Main Investigators: Frances S. McConnell, Bernard G. Greenberg, Robert E Coker, Jr., and John Kosa.

Status of Research and Publications: In process.

Agency: University of North Carolina, School of Public Health, under sponsorship of U. S. Department of Health, Education, and Welfare, Public Health Service.

Previous Digest Report: None.

Research Problem. Study the internal working relationships among the various occupational groups in local health departments in the United States. Areas to be examined are: the general patterns of cooperation in local health departments; activity areas of work-related cooperation; and selected social and organizational factors related to cooperation. It is anticipated that this knowledge will be useful in determining the most effective ways to use scarce public health manpower in providing community health services. (HR)

120. HUMAN ADAPTATION TO THE GREAT PLAINS

Main Investigators: Carle C. Zimmerman and Seth W. Russell.

Status of Research and Publications: In process.

Agency: North Dakota State University, Department of Sociology.

Previous Digest Report: None.

Research Problem. To investigate the many facets of change occurring in the living pattern of the Great Plains area, and consider how these changes can best be assimilated for the optimum benefit of its inhabitants. North Dakota is considered primarily.

A plan for regionalizing local governments into seven or eight areas of the State, leaving counties and townships for social and historical purposes is but one change. Within the next 25 years, much of the land of the State may be consolidated into larger farms, revert to pasture, or change into rural non-farm use. When the new water system of the State is completed and water from the Garrison Dam is diverted eastward to be used for irrigation, to supplement the smaller rivers, for cleaning up Devils Lake and for non-farm purposes generally, the rural non-farm population may become a much more important aspect in the residential patterns of the State. Some preliminary observations of this area have already been made in Report No. 7, Upper Midwest Economic Study. Within agriculture, itself, the gradual shifting of the farmsteads and houses to the borders of the major highways or to towns with good trading and school facilities must be considered an increasing possibility in present reorganization. Earlier, this movement has been handicapped by custom, lack of rapid power machinery for cultivation and the knowhow of automation of cattle feeding and watering. Now these changes are at hand enabling many families to live nearer consumption facilities rather than production. New problems have arisen with oil and uranium finds and the conversion of lignite to power at the site. How can these new forms of activity be added to the production complex of the State without destroying the countryside and creating an Appalachia? A program of shelterbelt developments and other improvements was suggested as possible and needed by the Missouri River Basin Agricultural Program, published as House Document 373, 81st Congress, GPO, 1949. This was a 30-year program. More than half the 30 years have passed. Is the program half completed? If not, has it been found unnecessary? It is hoped that the problems of each subtopic can be examined in light of the overall problem. (CCZ)

121. ANALYSIS OF NON-RESIDENTIAL TRIP GENERATION

Main Investigators: Edwin N. Thomas, Frank E. Horton, and John W. Dickey.

Status of Research and Publications: Completed. Published by and available from Transportation Center, Northwestern University, Evanston, Illinois 60204. \$1.50 per copy.

Agency: Northwestern University, Transportation Center, under sponsorship of U. S. Bureau of Public Roads.

Previous Digest Report: None.

Research Problem. An empirical examination of three interrelated problems: (1) the effects of different land-use activity groupings and the influence of different levels of areal aggregation on the variation in trip generation; (2) the effects of the locational variables on trip generation to commercial parcels within an urban area; (3) an analysis of linkages between land-use activities on multi-purpose trips.

Method of Study. Data were obtained from the origin and destination and the detailed land-use survey completed by the Texas Highway Department in the metropolitan area of Waco, Texas.

Major Findings. Among the principal conclusions are these: an easily programmed and flexible routine for establishing a reduced set of land-use activity groups which tend to be internally homogeneous in terms of non-residential trip generation has been developed. By using this grouping technique, it is possible to reduce the number of land-use activity categories to between eight and twelve groups. Land-use activity groups thus derived appear to be statistically independent of certain physical properties of the areal units which comprise them. The estimation of non-residential trip generation is improved by making forecasts for larger areal units. The frequency distributions of trips to parcels are J-shaped. The analysis of non-residential trip generation at the parcel level clearly adds locational precision to trip ends. (WBT)

122. MONITORING URBAN TRAVEL

Main Investigators: W. L. Garrison and R. D. Worral.

Status of Research and Publications: Completed. Report submitted to sponsoring agency.

Agency: Northwestern University, Transportation Center, under sponsorship of National Cooperative Highway Research Program, Highway Research Board, National Research Council.

Previous Digest Report: None.

Research Problem. To develop methods of dealing incisively with traffic diversion and generation. A consideration of alternative levels of study led to the conclusion that a disaggregated approach was highly desirable and the study focused mainly upon the household in a spatial and in a temporal setting, as the unit of travel generation

Major Findings. Attention was drawn to the potential of the continuing "panel" survey as a mechanism for the analysis of travel. The self-administered travel-diary provides a convenient mechanism for the continuing study of household travel behavior. With the exception of certain isolated and highly constrained trip-types, the temporal distribution of household travel is very irregular. There is strong evidence to suggest that a grouping of household types exists, defined in terms of the variability of their temporal travel behavior. The most efficient, single estimate of average daily trip-making, allowing for data-collection costs, appears to be that derived from a consecutive three-day weekday sample. At the level of the single household, a variety of disaggregate measures may be identified which relate closely to the pattern and intensity of daily travel. (WBT)

123. ANALYSIS OF URBAN TRANSPORTATION RESEARCH

Main Investigators: Jack E. Snell and Paul W. Shuldiner.

Status of Research and Publications: Completed. Issued as Research Report. Available from Transportation Center, Northwestern University, Evanston, Illinois 60204. \$1.50 per copy.

Agency: Northwestern University, Transportation Center, under sponsorship of American Society of Civil Engineers, Urban Transportation Research Council.

Previous Digest Report: 13:1-163.

Research Problem. To develop a method for reviewing and analyzing research in urban transportation. It is not intended to be an evaluation of any given research project or program, nor an exhaustive review of research activities leading to a detailed statement of research needs. However, throughout the course of the report, broad areas of need are identified, and a limited review of two central activities, urban transportation planning and technology development, was conducted as a preliminary test of the basic concepts of the review and analysis approach.

Hypothesis. Research cannot be viewed in the abstract or in a piecemeal fashion. A meaningful analysis of research in urban transportation must consider the eventual consequences of such research for the urban environment as a whole, rather than limit its concern to the effect on transportation per se. The study, therefore, employs a systems approach.

Method of Study. A framework for the review and evaluation of urban transportation research is developed, consisting of three major parts: (1) a conceptual model of urban transportation research; (2) a system of information classification; and (3) a methodology for research analysis.

Major Findings. A number of major research gaps are identified, including the need to integrate improved procedures for transportation technology design into the broad context of urban environmental goals. The combined strategies of economics and systems analysis provide an effective means of synthesizing a number of aspects of urban transportation that previously have only been considered separately. (WBT)

124. EQUIPMENT SCHEDULING IN RIVER SYSTEM TRANSPORTATION

Main Investigators: A. Victor Cabot and Arthur P. Hurter, Jr.

Status of Research and Publications: Completed. Publication by sponsoring agency expected.

Agency: Northwestern University, Transportation Center, under sponsorship of Resources for the Future, Inc.

Previous Digest Report: None.

Research Problem. The scheduling of equipment of an inland waterway carrier in response to demands for services, in order to maximize profit for the carrier.

Method of Study. A short-run view is assumed, and the problem is cast as a mathematical programming problem. First, the short-run scheduling problem of the waterway firm is considered. It is cast as a mathematical programming problem through the use of a transformation of the firm's river routes into an equivalent network of nodes. Artificial intermediate demands at each node are introduced, to facilitate the representation of the problem in a linear programming format. This representation is then transformed into one more amenable to standard computational devices. Through the use of the duality principles of mathematical programming, the manner in which the scheduling model can be employed to evaluate investment proposals for the carrier and to evaluate improvements in the channels on which the carrier operates is indicated. The value of the improvements is measured in terms of the profits to the individual carrier firm. Examples of optimal schedules for given sets of demands are given, with calculations carried out using a linear programming algorithm available for most computers. (WBT)

125. DEVELOPMENT OF MORE RESPONSIVE URBAN AND TRANSPORTATION SYSTEM MODELS

Main Investigators: Edwin N. Thomas and Joseph L. Schofer

Status of Research and Publications: Completed. To be issued in proceedings by conference agency.

Agency: Northwestern University, Transportation Center. Presented to the High Speed Ground Transportation Committee of the International Society for Terrain-Vehicle Systems, Inc., held at McMaster University, Hamilton, Ontario, Canada, April 14, 1967.

Previous Digest Report: None.

Research Problem. To develop more responsive urban and transportation system models. The mix of urban phenomena about which there is conscious concern has broadened: many more elements in our urban environment are perceived as operating at less than satisfactory levels, and new and expanded programs are being developed to improve performance. This has increased the complexity of environmental research.

Early urban system models tended to be task-oriented and manifested a specific viewpoint about particular urban phenomena. A second generation of urban system models is needed. These models will have to be more comprehensive and less parochial than their predecessors if they are to fill existing and future research and policy needs.

Method of Study. A general urban system model is presented. From the general model, an urban transportation subsystem is extracted and treated in greater detail. Social and psychological factors which are relevant today, but which we anticipate will be of greater concern in the future, are given special emphasis. (WBT)

126. SYSTEMS APPROACH TO TRANSPORTATION PROBLEMS

Main Investigators: Edwin N. Thomas and Joseph L. Schofer.

Status of Research and Publications: Completed. Issued as Research Report. Available from Transportation Center, Northwestern University, Evanston, Illinois 60204. \$1.50 per copy.

Agency: Northwestern University, Transportation Center.

Previous Digest Report: None.

Research Problem. Provide a background to help the transportation planner perceive ways in which systems analysis may be helpful to him in attempting to formulate and evaluate transportation plans. (WBT)

127. DATA SYSTEM REQUIREMENTS OF URBAN AND REGIONAL POLICY MODELS

Main Investigators: W. L. Garrison, E. N. Thomas, and R. D. Worrall.

Status of Research and Publications: Completed. To be issued as proceedings by conference agency.

Agency: Northwestern University, Transportation Center. Presented at the Symposium on the Role of Economic Models in Policy Formulation, U. S. Department of Housing and Urban Development and O. E. P., National Resource Evaluation Center, Washington, D. C., October 21, 1960

Previous Digest Report: None.

Research Problem. (1) Review and evaluate the adequacy of those data systems upon which the main modeling efforts in urban and regional policy are presently based. (2) Describe certain desirable properties of models, based upon our present understanding of the efficacies of alternative modeling strategies and of the relative priorities of the classes of policy and scientific questions to which modeling ought to be addressed. (3) Describe data systems requirements. These requirements extend from the confluence of the consideration of existing data systems and the identification of those properties of models with which we ought to be working.

Major Findings. Models in use at present are very severely constrained by the data systems that are available and, furthermore, lack of data prevents extensions of models in some desirable directions. The report reviews the state-of-the-art of modeling and data systems, offers recommendations and programs of development. (WBT)

128. COMPARATIVE STUDY OF ANOMIE IN THE KIBBUTZ

Main Investigators: Salomon Rettig, Shlomo Shoham.

Status of Research and Publications: In process.

Agency: Ohio State University, College of Medicine, in cooperation with Bar-Ilan University, Israel.

Previous Digest Report: None.

Research Problem. Recent incidents of organized juvenile delinquency in two of Israel's senior agricultural collectives led to the present study. The process of anomie has apparently begun in some Kibbutzim, set in motion by the combined forces of a shift in the position of the Kibbutz in Israeli society; the increased affluence, size, and urbanization of the Kibbutz; and the increased absorption of Eastern immigrants, leading to norm conflict.

Method of Study. Twenty-five Kibbutzim will be surveyed, representing all political parties. The Kibbutzim will be chosen to maximize the differences in the above mentioned characteristics. Objective and subjective indices will be used to assess the state of anomie in each Kibbutz, including rates of suicide, crime and delinquency, prostitution, as well as scaled measures of normlessness, powerlessness, anomia, and psychopathology. All variables will be intercorrelated. Interviews will be conducted with randomly chosen sub-samples from the various strata within each Kibbutz. (SR)

129. ECONOMY, POPULATION, AND COUNTY FINANCES OF OREGON AND CALIFORNIA COUNTIES

Main Investigators: Donald N. Johnson and Kenneth C. Tollenaar

Status of Research and Publications: Publication to be available winter of 1967-68 from Bureau of Municipal Research and Service, University of Oregon, P. O. Box 5177, Eugene, Oregon.

Agency: University of Oregon, Bureau of Municipal Research and Service,
under sponsorship of Association of O & C Counties.

Previous Digest Report: None.

Research Problem. To analyze the economic impact of the Oregon and California revested lands on the economy of the region and on local government finance; to ascertain the nature and the extent of benefits accruing to the resource from selected county government expenditures; and to prepare a case study of one of the eighteen O & C counties describing in detail the costs and benefits of the O & C resource in relation to county finances and administration.

Previous Relevant Research. O & C Counties: Population, Economic Development, County Finances, Bureau of Municipal Research and Service, University of Oregon, 1957. 138 pp. (JCD)

130. COMMUNITY NORMATIVE STRUCTURE

Main Investigator: John M. Foskett.

Status of Research and Publications: In process.

Agency: University of Oregon, Center for the Advanced Study of Educational Administration, under sponsorship of U. S. Department of Health, Education, and Welfare, Office of Education, Cooperative Research Program.

Previous Digest Report: None.

Research Problem. Identify characteristics of the normative structure of communities as it pertains to the roles of school personnel; identify variables by which to account for the characteristics found; and relate the characteristics of the normative structure to selected problems in school administration, such as community support. This study is a replication and refinement of a study carried out previously in another community.

Method of Study. The basic research tools are role norm inventories for the positions of elementary school teacher and elementary school principal. The subject populations are elementary school teachers and principals, central office personnel, a random sample of citizens, and an identified population of education "actives." For the teachers and principals, responses include their own views regarding their own and each others' positions, and their perceptions of the views of each of the other populations for their own position. The other populations respond in terms of their own views for the two positions and their perceptions of the views of teachers and principals. The analysis of the responses includes the measurement of level of consensus within populations and sub-populations and a comparison of the responses of each population to those of each of the other populations. (JMF)

131. EXTENT AND CHARACTER OF DELINQUENCY IN AN AGE COHORT

Main Investigators: Thorsten Sellin, Marvin E. Wolfgang, Robert S. Figlio, Bernard Cohen, Albert Cardarelli, William Hohenstein, and Dogan Akman.

Status of Research and Publications: In process.

Agency: University of Pennsylvania, Department of Sociology, under sponsorship of U. S. Department of Health, Education, and Welfare, Public Health Service.

Previous Digest Report: None.

Research Problem. An investigation of the extent, qualitative nature, and progression of delinquency in a cohort of all boys born in 1945, entering schools in Philadelphia, Pennsylvania, before their tenth birthday and remaining continuously in that city or within its jurisdiction until their eighteenth birthday.

Method of Study. Data on the boys' school history have been taken from the records of public and private schools (parochial or secular) and offense reports of their police contacts have been secured from the Juvenile Aid Division of the Police Department, which has kept records since 1952. Delinquents will be compared with non-delinquents for series of personal and other data available. In the study of the progression of delinquency, weights developed in a previous investigation will be assigned to offensive events and to the offenders involved. Data are being coded for about 10,000 boys and, among them, nearly 4,000 delinquents involved in an estimated number of nearly 11,000 events. (TS)

132. RELATIONSHIP BETWEEN AIR POLLUTION AND INDUSTRIAL ABSENTEEISM

Main Investigators: C. Dohan, J. Ipcon, R. Stone, and J. Dunn.

Status of Research and Publications: In process.

Agency: University of Pennsylvania, School of Medicine, in cooperation with A. T. and T. Co. and Western Electric Co., under sponsorship of U. S. Department of Health, Education, and Welfare, Public Health Service.

Previous Digest Report: None.

Research Problem. To determine whether a relationship exists between air pollution and absence from work

Previous Relevant Research. An earlier study by Dr. Dohan of absence records from several plants of the Radio Corporation of America showed a high degree of correlation between rate of prolonged absence and atmospheric particulate sulfate levels.

Method of Study. Studies of short-term absences by cause are being carried out in selected work units of R.C.A. and the Philadelphia Telephone Company. Studies of prolonged absence of A. T. and T. Company and Western Electric Company employees are being conducted in several cities. Aerometric data is also being obtained in the study cities. (HR)

133. INTEGRATED STORM WATER PLANNING

Main Investigator: Brian M. Reich.

Status of Research and Publications: In process.

Agency: Pennsylvania State University, Department of Civil Engineering, under sponsorship of U. S. Department of the Interior, Office of Water Resources Research.

Previous Digest Report: None.

Research Problem. Simplification of integrated storm water planning for modern multiple land use in urban and suburban developments.

Method of Study. A synthesis of existing knowledge of flood runoff from small rural and urban watersheds will be made. Incorporation of routing techniques will enable the study of the influences of various reservoirs and flood ways for the attenuation of peak discharges and multiple use of stored runoff to be made. Hypothetical situations to be considered, by electronic computer techniques, will typify those encountered or possible in the future in the Northeastern states around and including Pennsylvania. (BMR)

134. HIGH RATE WATER FILTRATION

Main Investigators: John B. Nesbitt, Wallace DeArmant, Frank Rice, Jr., and Gordon G. Robeck.

Status of Research and Publications: In process.

Agency: Pennsylvania State University, Department of Civil Engineering, and the City of Erie, Pennsylvania.

Previous Digest Report: None.

Research Problem. An investigation of high rate water filtration.

Method of Study. The study involves the conversion of two filters at the West Water Treatment Plant in the City of Erie to multiple medium filters containing 20 inches of 0.95mm effective size anthracite coal on top of six inches of 0.45mm effective size sand; and the installation of a coagulant aid feed system, new rate controllers, and multiple head loss taps. A year's study will be made during which time one filter will be run at a rate of 6 gpm/ft² and the other filter run at rates varying from 3 to

5 gpm/ft². A third conventional sand filter will be run at 2 gpm/ft² as a control. Control tests will involve continuous reading of turbidity on raw, settled, and filtered water; incremental head losses; raw water temperature; length of filter run; wash water volume; daily millipore filter coliform counts; plankton; tastes and odors; lignin; and monthly complete chemical analyses. Raw water for the plant is from Lake Erie and has a maximum turbidity of about 50 Jackson Turbidity Units. It is treated by alum coagulation with standard coagulation and settling. A pilot plant study investigating high rate filtration without prior flocculation and settling is being conducted concurrently by the U. S. Public Health Service. (JBN)

135. THE CARBONATE HYDROGEOLOGIC ENVIRONMENT, ITS RELATIONSHIP TO LAND USE, WATER RESOURCES DEVELOPMENT AND MANAGEMENT

Main Investigator: Richard R. Parizek.

Status of Research and Publications: Completion scheduled for 1967.

Agency: Pennsylvania State University, Department of Geology and Geophysics, under sponsorship of U. S. Department of the Interior, Office of Water Resources Research.

Previous Digest Report: None.

Research Problem. Investigate the geologic and hydrologic factors pertinent to land use planning, and comprehensive water resources development and management. Study the geologic, topographic and land use factors that govern the occurrence, movement, and recharge of ground water; the inter-relationship among surface and ground water; and the chemical quality of ground water related to the above for a terrain underlain by nearly 10,000 feet of folded and faulted carbonate rocks in central Pennsylvania

Method of Study. Stresses acting on the physical environment brought about by draught, urbanization, industrialization, recreation, etc., will be investigated and related to the physical environment response. The importance of rock type, faults, folds, fracture traces, and topography will be related to the permeability and storage characteristics of rocks, their relationship to recharge, stream flow, and water quality. Geohydrologic factors relating site selection of sanitary landfills, storm water discharge, sewage effluent and industrial waste disposal will be investigated. The overall hydrologic response of this complex aquifer and surface water system will be analyzed using electrical analog techniques. (RRP)

136. IMPACT OF COMMUNITY ACTION AGENCIES ON LOCAL DECISION MAKING IN EDUCATION

Main Investigator: Nicholas A. Masters

Status of Research and Publications: In process

Agency: Pennsylvania State University, Department of Political Science, under sponsorship of Executive Office of the President, Office of Economic Opportunity.

Previous Digest Report: None.

Research Problem. Determine the impact, in terms of program decisions and allocations of resources, of federally funded local agencies on local educational decision making structures. Particular attention will be given to who furnishes the leadership in each component and what variables or biases tend to shape or restrict the policies and program commitments of each. The study will focus on: (1) the involvement of relevant community groups, including the poor, in the Community Action agencies' educational decision making process; (2) the relationship of Community Action agencies' education decision making to the allocation of educational resources within the local community; (3) the relationship of Community Action agencies' educational decision making to community conflicts in education, i.e., school integration, church-state relations; (4) the relationship of Community Action agencies' education decision making to program commitments.

Method of Study. The study will be conducted in these seven communities: (1) Trenton, New Jersey; (2) Cincinnati, Ohio; (3) Oakland, California; (4) Columbia, South Carolina; (5) Carter, Tippley, and Van Buren Counties, Missouri; (6) Corpus Christi, Texas; (7) Letcher, Knott, Leslie, and Perry Counties, Kentucky. (HR)

137. HOUSING AND NEIGHBORHOOD PREFERENCES

Main Investigator: Clifford C. Ham.

Status of Research and Publications: In process.

Agency: University of Pittsburgh, Graduate School of Public and International Affairs, under sponsorship of Urban League of Pittsburgh, Greater Pittsburgh Board of Realtors, with additional support from the Mayor's Commission on Human Relations.

Previous Digest Report: None.

Research Problem. Study the housing and neighborhood preferences of white and non-white families moving into suburban areas in and near Pittsburgh. Study is especially focused on changes as non-white families enter previously all-white areas. (CCH)

138. A SURVEY OF LANDMARK ARCHITECTURE OF ALLEGHENY COUNTY (PENNSYLVANIA)

Main Investigators: James D. Van Trump and Arthur P. Ziegler, Jr.

Status of Research and Publications: Completion and publication as book scheduled for late spring, 1967. Available from Pittsburgh History and Landmarks Foundation, 906 Benedum-Trees Building, Pittsburgh, Pennsylvania 15222. \$8.50 per copy.

Agency: Pittsburgh History and Landmarks Foundation.

Previous Digest Report: None.

Research Problem. To determine all significant architecture, whether an individual building or district of buildings, in Pittsburgh and Allegheny County.

Previous Relevant Research. Charles M. Stotz, The Early Architecture of Western Pennsylvania, 1936.

Hypothesis. That adequate preservation planning cannot be initiated until all significant buildings have been defined and described; that these buildings are not only important in themselves but contribute to the well-being of the community.

Method of Study. Walked or drove every street in Allegheny County as well as explored all previous written material in books and journals concerning Pittsburgh buildings. Research on each structure was conducted to ascertain its date of construction, materials, architecture, building style, and significance.

Major Findings. Some ten preservation districts were located within the County, i.e., neighborhoods of buildings where the whole is greater than the sum of the parts. Several hundred buildings are listed (JDVT)

139. HISTORY AND ARCHITECTURE OF ALLEGHENY COUNTY COURTHOUSE AND JAIL

Main Investigator: James D. Van Trump.

Status of Research and Publications: In process. Completion and publication as a book expected in 1968. To be published by University of Pittsburgh Press.

Agency: Pittsburgh History and Landmarks Foundation

Previous Digest Report: None.

Research Problem. The Allegheny County Courthouse and Jail, the last great works of the famous architect, Henry Hobson Richardson, are among the national monuments of American architecture. There is no doubt as to the importance of the buildings to Pittsburgh and the local landscape.

Previous Relevant Research. The investigator is the architectural historian of the buildings and has studied them extensively, written

articles and lectured on them. He supervised preparation of a set of drawings of the buildings as they now stand. The drawings are in the Library of Congress.

Research Problem. Examine all extant plans, drawings, and documents of the buildings with a view to determining how the buildings came into being and how they have in the succeeding years been altered and maintained. The final material will be a likeness of a civic monument, which, because it is still a living and integral part of the city it serves, will be an image of Pittsburgh itself and a reflection of the American 19th and early 20th century industrial city, generally. (APZ, Jr.)

140. WATER USE PATTERNS IN PUERTO RICO

Main Investigators: Antonio Santiago-Vazquez, Manuel F. deVera, and Ausberto Builbe

Status of Research and Publications: In process.

Agency: University of Puerto Rico, School of Engineering, in cooperation with the Puerto Rico Water Resources Authority and other agencies, under sponsorship of U. S. Department of the Interior, Water Resources Research Office.

Previous Digest Report: None.

Research Problem. Conduct a quantitative analysis of water use patterns in Puerto Rico: (1) inventory the past and present water use situation in Puerto Rico; (2) estimate major future trends in residential, commercial, industrial, and agricultural water uses.

Method of Study. (1) Conduct a survey to obtain data on water use for residential, industrial, commercial, and agricultural purposes from which present water consumption patterns can be determined. Statistical experiments will be designed and conducted cooperatively with the Puerto Rico Water Resources Authority and other agencies. (2) Project trends and estimate effects of new technology and the socio-economic changes on future residential, industrial, commercial and agricultural uses. Survey data will be subject to mathematical analysis in order to identify major trends in water use. (HR)

141. THE EFFECT OF URBANIZATION ON RUNOFF IN SMALL WATERSHEDS

Main Investigator: J. W. Delleur.

Status of Research and Publications: In process.

Agency: Purdue University, School of Civil Engineering, under sponsorship of U. S. Department of the Interior, Office of Water Resources Research, and Indiana Department of Natural Resources.

Previous Digest Report: None.

Research Problem. Study the effect of varying degrees of urbanization on the rainfall-runoff relationship in pre-urban, early suburban, and suburban watersheds, principally in West Lafayette, Indiana.

Method of Study. The following watersheds will be used: (1) the Ross Ade drain upper and lower watersheds having areas of 29 and 333 acres respectively, covering a fully developed suburban development and a portion of the Purdue campus, respectively. (2) The Purdue Swine Farm covering two watersheds having a total area of about 470 acres. The upper watershed is in the process of being developed. The lower watershed is in the pre-urban stage. The study will evaluate the volume and peak rate of runoff, shape of the hydrograph, frequency of peak discharge, infiltration rate, flow, time of concentration and time lag in terms of the land use intensity. Data obtained will be analyzed by means of conceptual and/or mathematical models simulating watersheds with varying degrees of urbanization. (JWD)

142. REGIONAL DEVELOPMENT SERIES

Main Investigators: See projects below.

Status of Research and Publications: Completed. Published as four companion-pieces by The Rand Corporation, 1700 Main Street, Santa Monica, California 90406. (1) S. H. Handel, Economic Viability and Regional Development, RM-4977. (2) I. S. Lowry, Federal Loans to Private Enterprise Under the Economic Development Act of 1965, RM-4978. (3) G. S. Fishman and D. A. Fitchett, Project Evaluation for EDA, RM-4979. (4) A. H. Pascal and Nancy E. Hausner, Criteria for the Location of Federal Regional Facilities, RM-4980.

Agency: The Rand Corporation, under sponsorship of U. S. Department of Commerce, Economic Development Administration

Previous Digest Report: None.

Research Problem. To investigate questions of operational and policy relevance confronting the Economic Development Administration, as specified in the Public Works and Economic Development Act of 1965 (P.L. 89-136). The topics were selected and the approaches outlined on the basis of consultations between representatives of EDA and the Rand team.

The first study addresses questions of the justification for public interest in regional economic development, and presents a taxonomy for the classification of subnational economies in terms of stage of development and growth potential. This scheme can be used to identify underdeveloped but viable economies in which publicly financed development programs have the greatest prospects for success from both the local and national points of view. The study examines possible explanations for the various characterizations of economies and suggests programs designed to promote growth

in those that are underdeveloped but viable, and adjustment for those that are non-viable. The intentions of the Congress in passing the Economic Development Act were very clear in regard to focusing on the creation of new income-generating activities, rather than the relocation of these activities from one area to another. Therefore, once a viable area for economic development is identified, the programs implemented there must be selected with due account taken of the expected effects in other areas of the nation.

The second study presents a technique for predicting the likely magnitude of "negative spillover" effects (loss of jobs or income elsewhere), through the use of market research tools

Given some indication of potential economic viability for an area, and at least some control on the possible adverse consequences of programs there on other areas, the question is then how to select among competing projects for that area. This is the purview of the third study which presents a model that uses available data for evaluating the discounted streams of project costs and benefits, with benefits measured primarily in terms of income generated in the designated area. The main contribution of the model is as an aid to EDA in allocating resources among requests for financing received from areas eligible for assistance. Several alternatives are suggested for a preselection ordering of the projects on the basis of the information revealed by applying the model.

The fourth study presents guidelines for selecting locations for federal regional facilities, taking explicit account of the additional costs and the local economic benefits that might occur if certain sorts of field activities were directed to depressed areas. It also contains a case study in which the guidelines are applied to the location pattern of a particular agency, the Small Business Administration. (JS)

143. COMPREHENSIVE PROGRAMMING OF PUBLIC FACILITIES

Main Investigators: Benjamin H. Stevens, Robert E. Coughlin, Ronald E. Miller, Colin Gannon, Stewart Marquis, and Nazir Dossani.

Status of Research and Publications: In process.

Agency: Regional Science Research Institute, under sponsorship of U. S. Department of Health, Education, and Welfare, Public Health Service.

Previous Digest Report: None.

Research Problem. (1) Specify physical, economic, social and other community goals; conduct empirical analysis of levels of goal achievement by various communities and interrelations among levels. (2) Conduct empirical analysis of contribution of projects to proximate goals, interdependent effects among projects, and interdependent effects among goals. (3) Develop systematic mathematical programming procedures with emphasis on integer programming methods; develop practical procedures for use by public agencies. (BHS)

144. MOVEMENT OF MANGANESE INTO GROUND WATER SUPPLIES

Main Investigators: Frank J. DeLuise and Henry Campbell.

Status of Research and Publications: In process.

Agency: University of Rhode Island, School of Engineering, under sponsorship of U. S. Department of the Interior, Office of Water Resources Research

Previous Digest Report: None.

Research Problem. Determine the causes for the gradual increase in manganese content of the well water supplies of two of Rhode Island's larger cities. It has been loosely attributed to nearby surface waters which have been increasingly polluted.

Method of Study. Laboratory percolation studies of representative soils will be carried out in order to determine what characteristics of the flowing fluid will give the results found in the field. The dissolved oxygen content, acidity, and the presence of reducing substances, will have an effect of the manganese content of the water. The laboratory studies will be correlated to field situations in three different locations. Two of these sources will be where the water contains approximately 1.5 mg/l of manganese. The third source will be one where the wells are located near a surface water being increasingly polluted by the presence of new industry. The well supply currently does not contain a measurable amount of manganese. (FJD)

145. A DRAINAGE PLAN FOR HILLSBOROUGH TOWNSHIP, NEW JERSEY

Main Investigator: R. B. Alderfer.

Status of Research and Publications: In process.

Agency: Rutgers - The State University, Agricultural Experiment Station, under sponsorship of the State of New Jersey,

Previous Digest Report: None.

Research Problem. (1) Develop a comprehensive plan to control the drainage and storm water runoff from Hillsborough Township; (2) develop criteria and guidelines for the preparation of a drainage section for the Township zoning ordinance; (3) develop criteria by means of which the municipal authorities and planning officials may review plans and petitions submitted for their consideration and/or approval. The project will correlate the drainage patterns, characteristics, and facilities required for existing agricultural land uses with those which will develop or be required in the Hillsborough area when it becomes urbanized. (HR)

146. NON-INSTITUTIONAL CARE OF THE AGED AND/OR THE CHRONICALLY ILL

Main Investigator: Robert P. Slattery.

Status of Research and Publications: In process.

Agency: Catholic Charities of St. Louis and Cardinal Ritter Institute, under sponsorship of U. S. Department of Health, Education, and Welfare, Public Health Service.

Previous Digest Report: None.

Research Problem. Identify and develop a method of providing comprehensive home care services for the aged and/or the chronically ill to permit them to remain in their homes as long as possible or to return to their homes from hospitals or institutions. This requires establishing a project for people with a multiplicity of needs which will change and need continual reassessment. It is to be neither a hospital nor service-oriented project but one that is community oriented. This coordinated service will be directed towards the prevention of disruption of family life and the physical and emotional trauma this causes the patient and his family, both adults and children.

Method of Study. The project will be limited to all the people in ten neighborhoods which are widely diversified economically, socially, and culturally, and to the patients in one general hospital. After a medical-social assessment of people's needs and strengths, a coordinated plan will be developed to provide the services needed either by this project or by use of community resources, through medical and nursing services, housekeeper home visitors, and the help of neighbors. The knowledge and experience gained will be disseminated, locally and nationally, through reports, publications, workshops and institutes and professional schools. (RPS)

147. COMMUNITY PLANNING GROUPS IN SAN DIEGO

Main Investigator: Harold H. Haak and B. Douglas Harman.

Status of Research and Publications: In process.

Agency: San Diego State College, Public Affairs Research Institute.

Previous Digest Report: None.

Research Problem. Study organized community participation in the planning process in San Diego; determine the impact of citizen views upon the planning process and of the effectiveness and desirability of citizen participation in community planning.

Method of Study. Study some fifteen area improvement associations and their relation to the San Diego City Planning Department in the City of San Diego. (WRB)

148. FEDERAL-LOCAL RELATIONS IN THE METROPOLITAN SAN DIEGO AREA

Main Investigator: Harold H. Haak.

Status of Research and Publications: In process.

Agency: San Diego State College, Public Affairs Research Institute.

Previous Digest Report: None.

Research Problem. Determine in some detail the kinds of federal-local relations found in a metropolitan area; determine the impact of federal programs and personnel upon local policies and politics. (WRB)

149. HISTORICAL DEVELOPMENT OF THE PLANNING PROCESS IN SAN DIEGO

Main Investigator: B. Douglas Harman.

Status of Research and Publications: In process.

Agency: San Diego State College, Public Affairs Research Institute.

Previous Digest Report: None.

Research Problem. Review the development of public planning in the City of San Diego. The study attempts to discern political and social background of San Diego public planning and to come to some conclusion regarding reasons why general planning in the City of San Diego has met with public rejection. (WRB)

150. THE STRUGGLE FOR EQUALITY

Main Investigators: Bert E. Swanson and David Rogers.

Status of Research and Publications: Completed. Published under the above title by Hobbs-Dorman, New York.

Agency: Sarah Lawrence College, Institute for Community Studies, Center for Continuing Education and Community Studies, and New York University, under sponsorship of U. S. Office of Education.

Previous Digest Reports: 11:2-109; 13:1-185.

Research Problem. Explore the problems and decision making processes associated with the integration of public schools in New York City.

Major Findings. The struggle for equality in New York City presents many ramifications, among them: (1) an attempt to introduce the Princeton Plan pairing of adjoining predominantly minority group schools; (2) a white boycott in opposition to the program; (3) the dismissal of a superintendent

with a national reputation. This controversy was the outgrowth of the great difference between American ideology and American practice. Although New York City, often referred to as "a great melting pot," is supposed to be one of the most tolerant in the nation, the controversy over integration showed several facets hitherto unobserved or ignored. The concept of the neighborhood school, and thus the neighborhood itself, was questioned. The school officials found themselves caught between theory and practice. This work examines the response of the New York City school system to demands for integration and the reactions produced by such appeals. There will be a long period of trial and error before any permanent satisfaction is achieved. The corollary of such permanent satisfaction is that a certain segment of the population will be moved to frustration and anger. (BES)

151. MOBILIZING LEADERSHIP FOR EFFECTIVE COMMUNITY ACTION

Main Investigator: Bert E. Swanson.

Status of Research and Publications: In process.

Agency: Sarah Lawrence College, Institute for Community Studies, Center for Continuing Education and Community Studies.

Previous Digest Report: None.

Research Problem. The purpose is, broadly, to mobilize leadership for effective community action. The project is an effort to innovate in the field of social science by providing a clinical setting in which to find the means of mobilizing community leaders. The efforts to develop leadership in Mount Vernon will be expanded. More specifically, this project hopes to: explore new ways of securing community action through the Tensions Seminar; evolve working leadership groups among the various factions, as well as to work separately with them to help them develop objectives and priorities; work with the Human Rights Commission to a greater degree; find ways to relate the School Board to its changing constituency; respond to requests to train volunteer community leaders to understand and work with community problems and projects; plan countywide symposiums and conferences and extend activities into other communities as requests are made for such services.

Previous Relevant Research. The project is based on the agency's Mount Vernon Tensions Seminar, one of a nation-wide series of twenty-two urban seminars, and involves the full range of leaders in a community dialogue. This year the Seminar has been appointed to serve as the Mayor's Advisory Committee, a fact which should enhance the probability of securing community action.

Method of Study. Identify the full range of community leadership: civic, business, religious, civil rights, Negro, and the indigenous leaders in the neighborhoods and among the poor; try to develop potential leaders in the Negro community; find ways to develop community leaders who can more

effectively respond to citizen demands and determine courses of action. Throughout most of the planning of project activities, the leaders are involved in determining the agenda and procedures. Research includes continuous evaluation of community events. The various means used to mobilize community leadership will be recorded and analyzed. (BES)

52. DECISION MAKING IN THE INTEGRATION CONTROVERSIES OF THE NEW YORK PUBLIC SCHOOL SYSTEM

Main Investigator: Bert E. Swanson.

Status of Research and Publications: In process. Completion scheduled for September, 1968.

Agency: Sarah Lawrence College, Institute for Community Studies, Center for Continuing Education and Community Studies.

Previous Digest Report: None.

Research Problem. The major objectives correspond to the three stages in the decision making processes of integrating the public schools of New York City. (1) An analysis of determinants affecting the formulation of the plan for integration--what plan will be used and when will it be implemented. (2) Description of how the plan is implemented--where the plan will be put into effect and how the community will be prepared for it. (3) A comparative study of variations in local acceptance. This objective is concerned mainly with what actually happens in the local school area affected by the plan.

Method of Study. (1) Determine what actions of pressure groups (generalized versus specific demands, strong versus mild threats if demands are not met, broadly based versus more narrowly based coalitions seeking integration) and of school officials affect the formulation of the plan for integration and the time table for its implementation by the Superintendent of Schools and the Board of Education. The integration plan is the dependent variable. The independent variables are the power of key actors, reflecting their values, organizational strategies and alliances, and the nature of their demands. (2) Determine what actions of the school system's field staff and local groups affect decisions on the implementation of plans, i.e., areas to be selected, changes in educational facilities and staff to be made in the schools, and techniques to be used in preparing education officials and local residents. The two dependent variables are the style of implementation and the extent of formal and informal compliance. (3) Determine what factors bear on the extent of acceptance of the plan for integration. In order to specify, elaborate, and test the hypotheses, two operational strategies are established: (a) statistical analysis and typing of local areas, using as major dependent variables demographic and structural characteristics of the local school areas, patterns of social and political participation, and the quality of school services; (b) a survey and qualitative

field study of four local areas, including a political profile of the area and an event analysis of the integration controversies. Specific research operations include statistical analysis, sample surveys, interviewing, monitoring, and observing. Working relations have been established with almost every major group and organization representing all points of view in the integration controversy. (BES)

153. IDENTIFICATION OF ORGANIC COMPOUNDS IN THE ATMOSPHERE

Main Investigators: William J. Barrett and William C. Coburn, Jr.

Status of Research and Publications: In process.

Agency: Southern Research Institute (Birmingham), under sponsorship of U. S. Department of Health, Education, and Welfare, Public Health Service.

Previous Digest Report: None.

Research Problem. (1) Extend the capabilities of air pollution analytical methods by developing new procedures for concentrating the organic compounds, other than the simpler hydrocarbons, that are present in an urban atmosphere and by applying combined gas chromatographic and infrared absorption techniques to the identification and estimation of these compounds. (2) Obtain specific information on the nature and concentration of trace organic compounds in the urban atmosphere of Birmingham, Alabama, so that the possible correlation of the incidence of lung disease with the occurrence of specific contaminants may be studied. (WJB)

154. PLANNING COMMUNITY HEALTH RESOURCES FOR DISASTERS

Main Investigators: Leonard A. Duce, O. Ray Hurst, William S. Moore, Lewis H. Williams, and Gordon A. Bohn.

Status of Research and Publications: In process.

Agency: Texas Hospital Association, under sponsorship of U. S. Department of Health, Education, and Welfare, Public Health Service.

Previous Digest Report: None.

Research Problem. Develop a plan to maximize efforts to close the gap between available and needed resources in a community, district, and state in the event of natural or man-made disasters which produce mass casualties. The importance to the public of current and planned community health activities in the event of disaster will be emphasized. Project results should furnish guidance to students studying specific aspects of health mobilization problems of community health organizations. Project work is initially for the State of Texas. However, methods, procedures, and programs will be developed in such a way that they are easily adapted by other states.

Method of Study. A computerized method will be used to evaluate the relative effectiveness of variable health and medical resources in various mass casualty situations. From such evaluations, an optimum medical plan should be determined for disaster casualties in any area. Persons involved in medical care will be trained in the development and operation of a testing vehicle which can then be used as an operational tool. A program will be developed to enhance the positive aspects of voluntary cooperation of all interested agencies in community health activities at all levels. (LAD)

155. COMMUNITY GOVERNANCE AND THE SCHOOL BOARD

Main Investigator: Michael P. Thomas, Jr.

Status of Research and Publications: Completed and published March, 1967.
\$1.50 per copy.

Agency: University of Texas, Institute of Public Affairs.

Previous Digest Report: None.

Research Problem. This study attempts to view educational decision making in Austin, Texas, a city of 225,000, within the general context of decision making in the community.

Hypothesis. Within the entire complex of people and groups who are influential in community affairs, it is possible to identify those people and groups who have an effect on decisions about the schools.

Method of Study. Data were gathered in three waves of interviews. The first wave was with a random sample of the city's population in connection with the community's self-study effort which preceded local action and urban renewal programs. Each respondent was asked to nominate neighborhood leaders and to name those persons he considered most active and influential in the community's affairs. A second round of interviews was conducted with those people who received more than one nomination as neighborhood leaders. Finally, those who received at least three nominations were interviewed, and a "snow-balling" technique was used to construct a list of persons thought to be influential in the city by people known to be active in municipal affairs. Interrelationships between and among the groups were analyzed, including overlapping organizational memberships.

Major Findings. Educational decision making is often influenced by factors outside the formal organizational structure. In the city studied, information and opinions are transmitted throughout the community with ease. There is a high degree of overlapping organizational membership that facilitates the transmittal of ideas and opinions. The boundaries of sub-systems like the school board are quite permeable, allowing values and opinions from other systems to be injected into any given system. At least with reference to the public schools, there seems to be a rather universally held set of

opinions and values about the kinds of behavior which are to be valued and supported. Disagreements about the relative emphasis to be given occupationally oriented programs as opposed to college preparatory programs are carried on within a context that is generally supportive. (FJ)

156. POLITICS IN A MEXICAN COMMUNITY

Main Investigator: Lawrence Graham.

Status of Research and Publications: Manuscript in preparation. Publication scheduled for fall of 1967.

Agency: University of Texas, Institute of Public Affairs.

Previous Digest Report: None.

Research Problem. Study the decision making process in a medium-sized Mexican community near Mexico City.

Hypothesis. It is possible to identify influentials within the Mexican community chosen for study, to analyze interrelationships among them, and between them and officials of the national government. It is also possible to describe the disruption in existing political relationships caused by a change in the community's economic base.

Method of Study. Information was obtained by use of questionnaires and extensive interviews. (FJ)

157. JUVENILE DELINQUENCY STUDY (LUBBOCK, TEXAS)

Main Investigators: Mhyra S. Minnis, Thomas H. Clover, Thomas M. Cannon, and John Michael Brooks.

Status of Research and Publications: Phase I completed. Phase II in process.

Agency: Texas Technological College, Department of Sociology.

Previous Digest Report: None.

Research Problem. Study the interaction patterns of groups or cliques as they affect juvenile delinquency activities and offenses, differentiated as to ethnic focus

Method of Study. The first phase of the study was a multi-faceted statistical analysis of a systematic one-third sample of a "universe" of 422 adjudicated juvenile delinquents over a six-year period, June 1, 1958 to May 31, 1964. The analysis established ecological and social class, relationships, significant factors of the juveniles' backgrounds, their offenses, family structure and the social conditions which impinge upon or contribute to their delinquent activities. The analysis differentiated the data according to the three ethnic groups in the community: Anglo, Latin, and Negro. (HR)

158. COMMERCIAL STRUCTURE OF THE TRI-COUNTY REGION (OHIO)

Main Investigator: Thomas L. Nash.

Status of Research and Publications: Completed. Report available from the Tri-County Regional Planning Commission, 578 W. Market Street, Akron, Ohio 44303. \$4.00 per copy.

Agency: Tri-County Regional Planning Commission (Medina, Summit, and Portage Counties, Ohio), Kent State University, Bureau of Economic and Business Research, and Akron Beacon Journal.

Previous Digest Report: None.

Research Problem. (1) Describe the changes that have taken place in the retail structure of the Tri-County Region and indicate the major reasons and problems associated with the changes. (2) Describe the 1966 retail structure of the region in terms of: (a) the location and types of significant shopping areas, i.e., all concentrations of four or more stores or individual stores consisting of over 10,000 square feet; (b) the number, types, and floor area of retail establishments in the various shopping areas; (c) the accessibility of the shopping areas and their related parking facilities; (d) the general and concentrated trade areas of selected shopping areas as indicated by shoppers' interviews. (3) Discuss the planning implications of the changes of retail structure in the Tri-County Region. (JEF)

59. AESTHETIC VALUES AND COMMUNITY APPEARANCE

Main Investigators: John C. Freeman and Foster D. Armstrong.

Status of Research and Publications: Completed. Report available from the Tri-County Regional Planning Commission, 578 W. Market Street, Akron, Ohio 44303. \$3.00 per copy.

Agency: Tri-County Regional Planning Commission (Medina, Summit, and Portage Counties, Ohio).

Previous Digest Report: None

Research Problem. Develop a public understanding of aesthetic values in community appearance by: (1) clarifying the meaning of aesthetics; (2) describing some of the factors which contribute to an aesthetic environment; (3) examining the aesthetic assets and liabilities of the Tri-County Region; (4) discussing the governmental policies that encourage and discourage aesthetic development of the region; and (5) suggesting alternatives for action. (JEF)

160. PARK 'N RIDE RAIL SERVICE

Main Investigators: Herbert A. Thomas, Jr., Douglas S. Powell, William E. Roach, Jr., Vincent I. Cassera, James W. Diffenderfer, Frank J. Roth, Ludwell A. Larzelere, Alex Johnson, Paul J. Duckett, and others.

Status of Research and Publications: A Mass Transportation Demonstration Project commenced October 27, 1963, concluded April 24, 1965. Final report issued May, 1967. Available from Tri-State Transportation Commission, 100 Church Street, New York, New York 10007.

Agency: Tri-State Transportation Commission (New Jersey, New York, and Connecticut), in cooperation with Middlesex County, City of New Brunswick, and Pennsylvania Railroad, under sponsorship of U. S. Department of Housing and Urban Development and the State of New Jersey.

Previous Digest Report: None.

Research Problem. To determine whether a railroad station--on the outskirts of a suburban city--that offered convenient vehicular access and ample parking space would attract new patrons, divert passengers from an older station in the heart of the city (thereby reducing traffic congestion), and draw riders from other travel modes.

Method of Study. The site selected was away from the commercial center of New Brunswick, 33 miles from the Manhattan central business district. A small modern station together with a 300-car parking lot (later expanded) was built with public funds on railroad property adjacent to the Pennsylvania Railroad main line tracts. The new station was 1.5 rail miles south of the existing downtown New Brunswick station. It was at the "mouth" of a storage yard for many of the Pennsylvania's suburban trains, and consequently, convenient for trains starting from this yard. Train service at the Jersey Avenue Park 'N Ride Station started on October 27, 1963, and, for an 18-month period until April 24, 1965, operated with support from project funds. The Pennsylvania Railroad then took over the station and parking lot at a predetermined residual value and assumed responsibility for continued operation, with free parking, at least until 1970. At the outset of the project, weekday service at the new station provided 21 trains to Newark and New York and 23 in the other direction, in contrast to service of about twice this frequency at the downtown New Brunswick station. Critical comments on this difference during the first months of the project led to the addition of three eastbound and two westbound trains in April, 1964. Still, the service was not as convenient as that at the central New Brunswick station, which is served by main line through trains in addition to all those originating at the Jersey Avenue station. Several of the main line trains are non-stop between New Brunswick and Newark, which is not the case for the Jersey Avenue service. In addition, equipment assigned to some of these trains, unlike those at Jersey Avenue, is more modern and air-conditioned--factors that add to the attraction of the downtown station for many riders. The Park 'N Ride location

is difficult to reach for those potential users whose homes are east of the Pennsylvania tracks. The street crossings of the railroad nearest to Jersey Avenue are somewhat more than a mile in either direction. As contrasted with the central station, no bus service is provided to Jersey Avenue, which is situated too far from residential areas to make walking convenient.

Major Findings. Customer counts at the new station showed a continuing though irregular increase. By January, 1966, some 445 persons were boarding the trains each day. The new station both attracted new rail riders and diverted some present rail users from the main New Brunswick station. However, counts made at the main station showed that new riders replaced those diverted. Actually, more travelers were counted at the main station at the end of 1965 than at the beginning of the project. Thus, the objective of relieving congestion was not achieved. Former bus and auto users contributed substantially to the station's patronage. In later surveys, from 13 to 20 per cent indicated they were former bus riders. Patrons who previously made their trips by auto were found to account for about 15 per cent of the initial patronage, and a larger per cent by the time the project ended. Another source of patrons was a group already using rail service who changed from other stations, principally the main New Brunswick station. Attracted by the free and convenient parking at the new station, this segment furnished as much as 70 per cent of the Jersey Avenue volume in November, 1963. About 90 per cent of the travelers were going to and from work. About 90 per cent of the patrons drove to the station and parked in the lot, in comparison with 60 per cent in the downtown station.

The findings lead to these conclusions: (1) Located outside the central business district of a suburban city, a Park 'N Ride station that has convenient vehicular access with ample parking space will attract new patrons to rail service. (2) The appeal of an outlying station primarily dependent upon the private automobile for access will be influenced by the availability of direct auto access routes from the surrounding residential areas. (3) The extent to which an outlying station, even with free parking, will attract passengers away from the suburban city center station is conditioned by the frequency of train service at the outlying station as contrasted with the center station. (JS)

61. COORDINATED BUS-RAIL SERVICE

Main Investigators: Andrew G. Schiavone, Robert P. Slocum, Aaron R. Fried, Edwin G. Michaelian, Ernest A. Capitani, Jr., James M. Loconto, Ludwell A. Larzelere, Alex Johnson, Paul J. Duckett, and others.

Status of Research and Publications: A Mass Transportation Demonstration Project commenced September 17, 1963, concluded June 25, 1965. Final Report issued January, 1967. Available from Tri-State Transportation Commission, 100 Church Street, New York, New York 10007.

Agency: Tri-State Transportation Commission (New Jersey, New York, and Connecticut), in cooperation with New York State Office of Transportation, Rockland and Westchester Counties, Rockland Bus Lines Inc., and New York Central Railroad, under sponsorship of U. S. Department of Housing and Urban Development and the State of New York.

Previous Digest Report: None.

Research Problem. To determine whether suburban rail patronage could be improved if feeder bus service from outlying areas could be coordinated with the schedules of a rail service, effectively enlarging the tributary area of the suburban rail station and attracting suburbanites from the highway back to public transportation.

Method of Study. The area selected was Rockland County, on the west side of the Hudson River, centered 35 air miles from the Manhattan Central Business District. The county lacked fast, convenient rail service direct to midtown Manhattan, and alternate modes of travel--the bus and private auto provided most of the transportation to the city. Some Rockland County residents were using the trains from Tarrytown, most of them driving to the station. A few others took a bus to Tarrytown, but the service was slow and infrequent--providing four round trips a day during rush hours. It was decided to improve this bus service, which was ready to drop all operations, in an attempt to test the attractiveness of a good feeder bus service. Twenty-four daily round trips were scheduled for Monday through Friday, twelve during peak periods and twelve during midday and evening hours. The peak hour service was planned to meet the popular commuting trains to and from Grand Central, and the route were realigned to provide some express service to Tarrytown. The schedule of 24 round trips was operated until December 6, 1964. By June 25, service was confined to peak hours only, with five round trips operating in both morning and evening rush periods.

Major Findings. Substantial traffic was attracted to the service. Patronage grew steadily throughout the first year of the demonstration from an average of more than 200 riders in both directions to a high of 467. Later, patronage declined somewhat, with rather substantial declines after service modifications. The overwhelming majority of the users were residents of Rockland County communities in the area of the bus route. Most were travelers taking trains at Tarrytown for Manhattan. Riders were attracted to the project service primarily from the private automobile. Traffic on the demonstration route was specialized. It tended to flow in unidirectional peaks, reflecting the typical journey-to-work pattern. This left much unused bus space and consequently presented financial problems to the economics of the operation. The unbalanced loading and lack of off-peak and reverse travel combined with the short-haul character of a substantial portion of the traffic meant that insufficient revenue was generated to cover operating costs. Over the entire 21 months of operation, the service incurred a deficit of \$.632 per passenger.

The findings lead to these conclusions: (1) A feeder bus service in a low density suburban area, providing fast, frequent and accessible service, and coordinated with rail service to a major employment center, will attract substantial traffic. (2) Typical of travel between suburbs and city, this traffic will be oriented to work trips, and will be of an unbalanced nature--heavily one-directional in each of the traditional morning and evening peak periods. (3) The location of a core terminal which provides convenient access to places of employment will exert an affirmative influence on the passenger's choice of route when several alternatives are available. (4) It is doubtful if a feeder bus service will attract an appreciable volume of off-peak traffic. (5) The unbalanced traffic flow in peak periods and under-utilization of seat capacity in off-peak hours places the burden of maintaining the service primarily upon the peak-hour traveler. With alternate and often cheaper modes of transportation available, he cannot be expected to bear these full costs. (6) The results of the experiment suggest that a feeder bus service, essentially of a short-haul nature, must find substantial off-peak use or be subsidized if it is to provide peak-hour shuttle service at reasonable cost to the user. (JS)

162. ECONOMIC DEVELOPMENT IN SOUTH ASIA

Main Investigator: Gunnar Myrdal.

Status of Research and Publications: In process. Publication scheduled for late 1967.

Agency: Twentieth Century Fund.

Previous Digest Report: None.

Research Problem. Assessment of the social and economic conditions of the area including Pakistan, India, Ceylon, Burma, Malaya, Thailand, Indonesia, and the Philippines, and a re-evaluation of economic theory as it relates to underdevelopment and the process of development.

Hypothesis. The social and institutional structure of these countries is so different from that in Western countries that the outlook and responsibility of the social scientist needs remodeling to deal effectively with the critical problems in these areas. (LF)

163. URBAN WEATHER SERVICE PLANNING STUDY

Main Investigator: Gene Geil.

Status of Research and Publications: In process.

Agency: U. S. Department of Commerce, Environmental Sciences Services Administration, Systems Plans and Design Division, Weather Bureau, (Silver Spring, Maryland)

Previous Digest Report: None.

Research Problem. To design an Urban Weather Service that will provide a substantial improvement in weather service to the urban population.

Method of Study. Analyze the present service, determine user requirements and potential service value, examine alternative techniques for providing an Urban Weather Service and evaluate the advantages of each in terms of resource requirements and benefits to the urban population. (HR)

164. DETECTION OF CRUSTAL MOVEMENTS--ANCHORAGE STUDY

Main Investigators: W. D. Harris, B. F. Lampton, and M. Keller.

Status of Research and Publications: In process. Aerial photography of pre-marked geodetic control has been acquired and analytic aerotriangulation is in progress.

Agency: U. S. Department of Commerce, Environmental Sciences Services Administration, Coast and Geodetic Survey, Research Group, Office of Geodesy and Photogrammetry, (Washington Science Center, Rockville, Maryland).

Previous Digest Report: None.

Research Problem. This is a monitoring study for the detection of crustal movements by photogrammetric measurements of a selected, populated site in an area of seismic activity.

Method of Study. In-house cooperation with the Divisions of Geodesy and Photogrammetry involving data acquisition and processing--basic geodetic control, aerial photography, and aerotriangulation--in order to obtain fundamental data for the future detection of any crustal movement, namely, by repeat studies made periodically to detect any interim movements in the earth's crust, and especially after an earthquake. (HR)

165. TASK FORCE ON ENVIRONMENTAL HEALTH AND RELATED PROBLEMS

Main Investigators: Ron M. Linton, Samuel Lenher, Ann Draper, Harold Sheppherd, John Hanlon, Raymond Tucker, Gary Frink, William Miron, and James A. Lee.

Status of Research and Publications: Completion expected and copy of report to be given to the Secretary June 1, 1967. Printed copies available about June 24, 1967, from office of Secretary of U. S. Department of Health, Education, and Welfare, Washington, D. C. 20201.

Agency: U. S. Department of Health, Education, and Welfare.

Previous Digest Report: None.

Research Problem. The Secretary of Health, Education, and Welfare, in creating the Task Force on Environmental Health and Related Problems charged it with drawing up a "battle plan" by which the Department could best discharge its responsibilities to the American people in matters of environmental health. Specifically, the Task Force was asked to: (1) Examine the Department's relationship to other federal agencies whose programs affect the environment. (2) See how the Department should assist state and local governments in meeting the challenge of protecting environmental health. (3) Consider approaches toward gaining increased industrial participation in the struggle to improve and safeguard the environment. (4) Examine the manpower needs, including ways in which adequate numbers of professional and sub-professional researchers and practitioners can be trained; consider how best to use our educational and research foundations in the national effort; investigate the needs of public awareness and education to make sure the public understands and is knowledgeable about its "environment--affecting" responsibilities.

Previous Relevant Research. (1) Report of the Committee on Environmental Health Problems to the Surgeon General, Public Health Service Publication No. 908, (U. S. Government Printing Office, Washington, D. C., 1962). (2) Advisory Committee on H. E. W. Relationships with State Health Agencies. A Report to the Secretary, December 30, 1966. (3) Health is a Community Affair, National Commission on Community Health Services (Massachusetts: Harvard University Press, 1966).

Hypotheses. The role and function of the U. S. Department of Health, Education, and Welfare is in need of greater clarification with regard to the problems of health and well-being arising from a rapidly changing man-environment relationship. Specifically, what the Department's role should be, the limits of its responsibility and jurisdiction, and the functions it should perform in meeting a national goal for environmental health, need to be determined.

Method of Study. Structured conferences with experts in the many fields and disciplines which collectively make up environmental health have been held around the nation. Interview teams have visited all federal agencies having environment-affecting responsibilities to obtain a variety of information. Consultants have been employed to assist the Task Force in specific areas. Such fact finding endeavors have resulted in a consensus by the Task Force members as to recommendations to be submitted to the Secretary. (JAL)

166. ENVIRONMENTAL RADIATION EXPOSURE STUDIES

Main Investigators: J. L. S. Hickey and R. K. Stoms

Status of Research and Publications: In process

Agency: U. S. Department of Health, Education, and Welfare, Public Health Service, Division of Radiological Health, Research Branch (1820 Chapman Avenue, Rockville, Maryland)

Previous Digest Report: None.

Research Problem. Gather the data necessary to evaluate hypotheses concerning the effects of environmental radiation on congenital malformations, infant deaths, and bone cancer.

Method of Study. (1) Analyze selected U. S. public well water supplies for ^{226}Ra and ^{228}Ra to identify population groups exposed to relatively high levels of environmental radium in water; (2) measure population exposure to external environmental gamma radiation in selected U. S. cities, using tissue equivalent chambers; and (3) develop practical individual dosimeters for measurement of individual exposure to external environmental gamma radiation. (JLSH)

167. EXPERIMENTAL ORTHOPHOTOMAP PRODUCTION AND DISTRIBUTION

Main Investigator: Marvin B. Scher.

Status of Research and Publications: In process. Completion scheduled for February, 1968.

Agency: U. S. Department of the Interior, Geological Survey, Topographic Division (Washington 25, D. C.).

Previous Digest Report: None.

Research Problem. Investigate cartographic treatment and reproduction techniques for orthophotomaps; evaluate 1:12,000-scale orthophotomaps of urban areas; obtain user reaction to orthophotomaps. (HR)

168. PEAK DISCHARGES OF WATER FROM EXTREMELY SMALL URBAN WATERSHEDS

Main Investigators: L. A. Martens, A. L. Putnam, and R. M. Burton.

Status of Research and Publications: Completion expected in 1967.

Agency: U. S. Department of the Interior, Geological Survey, Water Resources Division (Raleigh, North Carolina), in cooperation with the City of Charlotte, North Carolina.

Previous Digest Report: None.

Research Problem. Determine the significant physical parameters affecting peak discharge for urban watersheds having areas less than five square miles. These include such parameters as drainage area, lag time, basin slope, stream length, paved areas, sewerage and channel treatment, rainfall magnitude, rainfall intensity, and rainfall duration. The significant factors will be combined in formulas for peak runoff for selected recurrence intervals. (LAM)

169. MEDICAL CARE ACTIVITIES OF HEAD START PROGRAMS

Main Investigator: Not reported.

Status of Research and Publications: In process.

Agency: Executive Office of the President, Office of Economic Opportunity, through contract with Bio-Dynamics, Inc. (207 Bent Street, Cambridge, Massachusetts 02138).

Previous Digest Report: None.

Research Problem. Study and analyze existing health services of Head Start Centers in selected cities and describe how arrangements might be improved.

Method of Study. A group of at least ten communities will be visited by survey teams. From their observations and other sources of data, the following steps will be taken: (1) determine the current availability of federal funds and services; (2) determine the availability of state and local funds and services; (3) determine the availability of medical schools and other private groups, funds, and services; (4) identify prospective changes in fund availability during the next twelve months; (5) analyze the composition of each group of children to determine eligibility for various types of benefits; (6) determine the conditions under which services are provided; (7) compare the official version of availability and delivery of services with the beneficiaries' version of availability and delivery; (8) evaluate involvement of total health community in developing and operating program; (9) evaluate the systems and procedures developed to control quality of health services; (10) evaluate the procedures and systems designed to control costs; (11) determine the possibility of coordinating health services; (12) identify areas of personnel shortages and steps being taken to relieve shortage; (13) identify regulations, legislative or administrative requirements which are barriers to effective use of resources; (14) develop recommendations for alternative patterns of deliveries and financing services. (HR)

170. PREDICTION MODELS FOR INVESTMENT IN URBAN DRAINAGE SYSTEMS

Main Investigator: J. W. Knapp

Status of Research and Publications: In process.

Agency: Virginia Polytechnic Institute, in cooperation with Virginia Military Institute, Department of Civil Engineering, under sponsorship of U. S. Department of the Interior, Office of Water Resources Research.

Previous Digest Report: None.

Research Problem. Development of mathematical models of cost and design patterns for urban storm drainage systems based on land use, drainage area characteristics, and hydrologic and hydraulic factors.

Method of Study. Earlier regression analyses on total cost, design runoff, and the physical features of drainage areas will be extended to include drainage density and time-variant rainfall data. Multi-variant techniques will be investigated and analysis of residuals from regression models studied for differences in design procedure. Finally, the investment cost component of economic decision models will be formulated to study: (1) the least-cost solution of flooding potential in urban areas; (2) the comparison of combined and separate sanitary and storm sewerage systems; and (3) the optimum design of drainage networks. (JWK)

171. ANALYSIS OF HYDROLOGIC SYSTEMS

Main Investigator: James M. Wiggert.

Status of Research and Publications: In process.

Agency: Virginia Polytechnic Institute, Department of Civil Engineering, under sponsorship of U. S. Department of the Interior, Office of Water Resources Research.

Previous Digest Report: None.

Research Problem. Study the hydrologic runoff process in terms of fundamental systems analysis (or process dynamics). The study will investigate the response (discharge) of systems of simple configuration to inputs (rainfall of simple description. Also of primary interest is investigation of methods of similitude scaling essential to design of drainage systems. The results are expected to provide information which would ultimately lead to more rational design methods in urban drainage problems, particularly paved areas such as parking lots, roads, and airfields.

Method of Study. Small laboratory models will be used to provide data for the analysis. The study will be restricted to rectangular areas and square form rainfall. Time constants and amplitude ratios derived from the data will be used on other experiments as a check on the method. (JMW)

172. CRITERIA FOR WATER RESOURCES INVESTMENT

Main Investigators: Charles L. Leven and Richard Muth.

Status of Research and Publications: A three-year project scheduled for completion end of 1967. Recent Working Papers are Jack Ochs, Discount Rates for Public Investment Decisions, Working Paper CWR 8, October, 1966; Raymond J. Struyk, An Analysis of Tax Structure, Public Service Levels, and Regional Economic Growth, Working Paper CWR 9 & DRA 3, October, 1966; David William Rasmussen, Benefit Cost Versus The Rate Of Return: An Analysis of Investment Criteria,

Working Paper CWR 10, October, 1966; and Norman P. Swenson, Recreation Visits and Retail Trade Outside of Standard Metropolitan Statistical Areas, Working Paper CWR 11, November, 1966. Available from Institute for Urban and Regional Studies, Washington University, St. Louis, Missouri 63130.

Agency: Washington University (St. Louis), Institute for Urban and Regional Studies, under sponsorship of U. S. Corps of Army Engineers.

Previous Digest Report: 13:1-201.

Research Problem. The research is concerned generally with the problem of selecting among alternative water resource projects and, more particularly, with effects of water resource projects on regional economic development.

Working Paper 8 reviews and compares some of the major earlier arguments concerning the system of analysis used to determine the consequences of water resources investment projects, and the problem of evaluating future benefits. It then offers recommendations to individuals actually faced with investment decisions in the public sector.

Working Paper 9 represents a continuation of Raymond Struyk's work on "The Size and Distribution of the Tax Base Relative to Regional Economic Growth," reported as Working Paper CWR 3 (DRA2). The material in the report on the relationship between area growth and various characteristics of local taxation duplicates the findings in the earlier paper, with minor modifications. The analysis of the relationship between public sector expenditures at the local level represents additional research. The work was carried out as independent research in the Department of Economics.

Working Paper 10 represents an extension of earlier work by David Rasmussen reported in Working Paper CWR 4 in which he outlined the issues involved and the effect on project selection of using benefit-cost as opposed to rate of return formulations in project analysis. In CWR 10 the investigator has further extended that discussion, introduced additional explanatory examples, and attempted to provide an argument for the greater suitability of benefit-cost as opposed to internal rate of return formulations, at least for a wide range of investment decision situations.

Working Paper CWR 11 assesses the economic impacts or benefits of recreation. This was an independent study, not part of the current work for the U. S. Corps of Army Engineers. (CLL)

73. REGIONAL EFFECTS OF PUBLIC INVESTMENT

Main Investigators: Charles L. Leven, Harold J. Barnett, and Murray Weidenbaum

Status of Research and Publications: A three-year project initiated fall of 1966. Resulting Working Papers published to date are: Murray L. Weidenbaum, Innovations in State and Local Government Finance,

Working Paper EDA 1, February, 1967; and Murray L. Weidenbaum, A Government-Wide Program Budget, Working Paper EDA 2, February, 1967. Available from Institute for Urban and Regional Studies, Washington University, St. Louis, Missouri 63130.

Agency: Washington University (St. Louis), Institute for Urban and Regional Studies, under sponsorship of U. S. Department of Commerce, Economic Development Administration.

Previous Digest Report: 13:1-202.

Research Problem. To develop both a theory of public investment and analytical techniques for evaluating and selecting among alternative public investment programs. The project is concerned with investment in human as well as natural and capital resources.

Working Paper EDA 1 explores some of the financial and budgetary relationships between the federal government and state and local governments. It: (1) analyzes alternative methods of reallocating public resources from national to state and local levels; (2) deals with the newer techniques of program budgeting and raises the possibility of their use to improve the allocation of local resources. A statistical supplement indicates some historical trends in local government revenues and expenditures.

Working Paper EDA 2 is designed to help provide an improved framework for allocating public investment resources. It is based on a lecture given at the Washington University Public Investment Workshop in the Fall, 1966 semester. (CLL)

174. GROUND WATER RESOURCES AND BEDROCK SURFACE DELINEATION OF SOUTHEASTERN MICHIGAN

Main Investigator: Andrew J. Mozola.

Status of Research and Publications: In process.

Agency: Wayne State University, Department of Geology, under sponsorship of U. S. Department of the Interior, Office of Water Resources Research.

Previous Digest Report: None.

Research Problem. This regional study, embracing eight counties in the rapidly growing metropolitan area of southeastern Michigan, will: (1) investigate the contouring of the bedrock surface for delineation of buried rock valleys; (2) examine the nature and thickness of the overburden, the latter represented by an isopleth map; (3) investigate the occurrence and quality of ground water resources and possible contamination arising from human occupancy; and (4) compile geological data for future ground water investigations utilizing geophysical methods. Though in essence a ground water project, the report and maps should also be of interest to urban and regional planners as an environmental geologic study. (AJM)

175. THE DEVELOPMENT OF A MATHEMATICAL MODEL FOR OPTIMIZING THE ASSIGNMENT OF MAN AND MACHINE "RUN-CUTTING" IN PUBLIC TRANSIT

Main Investigator: Samy E. G. Elias

Status of Research and Publications: A Mass Transportation Demonstration Project completed and published under the above title, as Research Bulletin No. 81, Series 67, No. 3-5, September, 1966. Available from West Virginia University, Engineering Experiment Station, Morgantown, West Virginia 26506

Agency: West Virginia University, College of Engineering, with support from U. S. Department of Housing and Urban Development.

Previous Digest Report: None.

Research Problem. To investigate the possibility of developing a mathematical model to represent the manpower scheduling in the transit industry. On account of the increasing cost of labor, the transit industry's problem of manpower scheduling has considerable economic importance. Moreover, the multiplicity of choice and limitations of time do not assure a very economical schedule by the manual process. This led the investigator to believe that there is an urgent need to devise a quick and effective method of scheduling operators to realize the potential savings that exist. In order to minimize the labor cost by effective scheduling, it was felt necessary to investigate the possibility of developing a mathematical model first.

Previous Relevant Research. Samy E. G. Elias, The Use of Digital Computers in the Economic Scheduling for Both Man and Machine in Public Transportation, Engineering Experiment Station, Special Report No. 49, Kansas State University.

Method of Study. An integer linear programming model was set up. However, because of billions of variables and millions of constraints, this model cannot be solved, given the present state of computing techniques and with currently available integer linear programming. A model with 8,000 variables and 440 constraints is considerably beyond the capacity of current integer linear programming algorithms. Hence, a heuristic model was set up to solve the problem, and the model.

Major Findings. The model was tested and found valid and economical to use. The model is simple and reliable. The accuracy and speed by which a machine manpower schedule is constructed as compared to one manually developed should not be overlooked. It required 20.5 minutes to develop a machine schedule for a route with 24 blocks. The worth to transit management of the ability to have a schedule on short notice is difficult to measure, though its value is unquestionable. (SEGE)

176. A JOINT COMMUNICATIONS SYSTEM FOR LUZERNE COUNTY

Main Investigator: Hugo V. Mailey.

Status of Research and Publications: Completion and publication expected June, 1967.

Agency: Wilkes College, Institute of Regional Affairs, under sponsorship of Commonwealth of Pennsylvania, Department of Public Instruction.

Previous Digest Report: None.

Research Problem. To study the feasibility of establishing a joint communications system for the seventy-four municipalities in Luzerne County.

Method of Study. (1) Survey existing communications equipment; (2) evaluate present equipment systems; (3) study proposals and their cost for a joint communication system.

Major Findings. A joint communications system is feasible and desirable. (HVM)

177. ENVIRONMENTAL APPEARANCE AS A FACTOR IN HIGHWAY DESIGN

Main Investigators: Christopher Tunnard, Geoffrey Baker, and David Reed.

Status of Research and Publications: In process. Completion expected June, 1968.

Agency: Yale University, Department of City Planning, School of Art and Architecture, under sponsorship of State of Connecticut, State Highway Department.

Previous Digest Report: None.

Research Problem. Evaluate the relative importance of roadside features (commercial development, natural scenery, outdoor scenery, outdoor advertising, landscaping, traffic control equipment, etc.) on the environmental appearance of the highways. The study will: (1) evaluate four functionally different types of highways--(a) limited access highways, (b) rural scenic secondary highways, (c) highways with strip commercial development, and (d) urban arterial streets; (2) design changes, incentives and controls which should lead to benefits for the public; and (3) evaluate the cost and benefit implications of these suggested changes, incentives and controls.

Method of Study. (1) Conduct interviews, reconnaissance and design studies, correlate objective and subjective approaches, and employ statistical analysis and design concepts; (2) investigate the effects of vision and perception on those driving the four types of highways; (3) select typical stretches of Connecticut highway in each of the four categories for intense

reconnaissance; (4) conduct attitude surveys to find the most important visual features along the highway; (5) concentrate on pressure points where improved appearance will have the widest effect and present proposals for comment in open discussion; (6) analyze adjusted proposals for cost and benefit implications and outline a guide for future highway expenditures; and (7) present proposals in an illustrated report and support conclusions by factual appendices of investigation results. (CT)

BELGIUM

178. CRIMINALITY AND INDUSTRIALIZATION IN ZELZATE, BELGIUM

Main Investigators: Jean-Paul Van Roy and Nicole Lahaye.

Status of Research and Publications: Commenced December, 1964. Completion scheduled for 1971. For information, contact Centre National de Criminologie, 1, Rue Abbe Cuypers, Brussels 4, Belgium.

Agency: Centre National de Criminologie, Belgium, Free University of Brussels, Institute of Sociology, Belgian Ministry of Justice, and Centre d'Etude de la Delinquance Juvenile, under sponsorship of Government of Belgium, Ministry of Justice.

Previous Digest Report: None.

Research Problem. Study the connection between delinquency and industrialization by following the evolution, qualitatively and quantitatively, of criminality in Zelzate, Belgium. The transformation of the socio-cultural milieu in Zelzate, as a result of the building of an industrial plant there, forms the background of the study. The investigation has three phases: (1) a study of criminality during the five years preceding the construction of the industrial plant; (2) a study of criminality during the three-year period of the construction of the plant; (3) a study of criminality during the first five years of the plant's operation. Study and analysis of changes in the socio-cultural milieu of Zelzate during this thirteen-year period will parallel the study of criminality. Data thus obtained will be correlated in order to establish the relation between criminality and industrialization. (HR)

CANADA

179. ACCESSIBILITY, COST AND ENVIRONMENTAL QUALITY CRITERIA FOR URBAN UNIVERSITIES

Main Investigators: V. Setty Pendakur and B. Griggs.

Status of Research and Publications: A continuing research project just initiated. Completion expected March, 1968.

Agency: University of British Columbia, Department of Community and Regional Planning, under sponsorship of Faculty of Graduate Studies.

Previous Digest Report: None.

Research Problem. To test the validity of Buchanan's thesis for a selected universe, in this case a university.

Major Findings. Preliminary findings would indicate that Buchanan's thesis could be restated in terms of level of congestion and environmental quality in the case of urban universities. Furthermore, this hypothesis could be generalized as applicable to any situation involving accessibility. (VSP)

180. AN EVALUATION OF CURRENT URBAN RENEWAL PRACTICE IN CANADA

Main Investigator: Robert W. Collier.

Status of Research and Publications: Completion scheduled for August 1, 1967. A survey of professional planners across Canada has been completed and the results tabulated. Research findings being assembled in preparation for publication.

Agency: University of British Columbia, Division of Community and Regional Planning, under sponsorship of Central Mortgage and Housing Corporation of Canada.

Previous Digest Report: None.

Research Problem. Because urban renewal programs in Canada have not been subject to an independent evaluation except in certain specialized instances, there was a need to make an assessment of current, nation-wide practice in urban renewal.

Previous Relevant Research. Under the direction of Kevin Cross, a bibliography was established for Urban Renewal in Canada.

Hypothesis. There is a discrepancy between the officially stated objectives of Urban Renewal in Canada and the objectives followed by the planning profession.

Method of Study. A review was made of the reports that have been prepared in 31 cases across Canada. A tabulation was made of the particulars of these reports and submitted as an interim report to CMHC. A survey was made of professional planners' opinions at all three levels of government, federal, provincial, and municipal. The sample was directed towards those agencies and areas in which an urban renewal study had been completed or where a study had been approved. In addition, public records were explored. Variables involved in the urban renewal process were weighted to give some comparable figures for evaluation on a nation-wide basis.

Major Findings. There was no complete refutation or confirmation of the hypothesis, but there was much evidence to support that hypothesis. The practice of urban renewal has been changing but has been hampered by administrative difficulties and complexities in the legislative program (RWC)

ENGLAND

181. GAMING PROCEDURES IN THE SIMULATION OF URBAN PHENOMENA

Main Investigators: John L. Taylor and Richard N. Maddison.

Status of Research and Publications: In process. The following publications have been issued: (1) John L. Taylor, A Synoptic View of Urban Phenomena: Notes on the Use of Gaming-Simulation Techniques in Planning Education, Town Planning Institute Journal, Vol. 53, No. 1, January, 1967. (2) John L. Taylor and Richard N. Maddison, An Introduction to Operational Gaming Procedures in Planning Education, SCUPAD Bulletin No. 4. (Proceedings of the 2nd Salzburg Congress in Urban Planning and Development, May 18-22, 1967). (3) John L. Taylor and Richard N. Maddison, A Land Use Gaming Simulation: The Design of a Model for the Study of Urban Phenomena (forthcoming). For information, contact John L. Taylor, Department of Town and Regional Planning, University of Sheffield, Sheffield, 10, England.

Agency: University of Sheffield (England), Department of Town and Regional Planning.

Previous Digest Report: None.

Research Problem. The project is primarily concerned with educational aspects of gaming and simulation with reference to the study of urban development. Current work can be summarized broadly as: (1) investigations into the development of gaming-simulation theory and methodology relevant to planning education; (2) experimental studies into the design, operation, and evaluation of a variety of new and existing simulation techniques.

Method of Study. Initially, the experimental studies have concentrated upon the examination and evolution of urban development games at the undergraduate level. In particular, a Land Use Gaming Simulation (LUGS) has been designed as a prototype model for demonstrational purposes. This model is being used and tested by diverse groups of undergraduates, graduates, and staff at universities in the United Kingdom, Europe, and the United States.

(JLI)

BRIEF MENTION

NEW URBAN AND REGIONAL RESEARCH AND TRAINING PROGRAMS

New Graduate Curriculum at University of Pittsburgh

University of Pittsburgh's Graduate School of Public and International Affairs announces a new Urban Community Development Program, leading to the degree of Master of Public Administration. The curriculum will focus on planning and action for social betterment in neighborhoods as well as in the total urban area.

New Doctorate Program at M.I.T.

The Departments of City Planning and Political Science at M.I.T. announce a new program leading to a Ph.D. in Urban Politics and Planning. The program features an interdisciplinary policy-problem orientation in an effort to integrate more closely the increasing research capability of the social sciences with environmental and humanistic perspectives of the city.

LEGISLATION

Demonstration Cities and Metropolitan Development Act of 1966

Passed by Congress on November 3, 1966, this act is the latest in the series dealing with housing and urban development legislation, among which the Housing Act of 1954 is, perhaps, the best known.

This new legislation is predicated on the recognition that the urban problem is more than a physical problem of substandard housing and obsolete facilities. Involved also are patterns of poverty and discrimination, lack of education, chronic unemployment and under-employment, and social alienation.

Legislation known popularly and collectively as the New Frontier and the Great Society Acts has provided cities with most of the basic tools required to mount a comprehensive attack on the human problems as well as the physical problems of blight and decay. However, the early years of operation of these federal assistance programs have revealed three areas of difficulty.

First, the programs are often project oriented and operate in isolation, failing to present a coordinated program that can make the necessary impact at the local level. Second, the programs operate through separate channels, emphasizing independent goals and the interrelationships between programs are often ignored. Third, there are gaps in program coverage which inhibit development of a comprehensive approach, and local programs are often tailored to meet grant requirements rather than local needs.

The Demonstration Cities and Metropolitan Development Act of 1966 is designed to overcome these difficulties. First, the Act requires a locally prepared "comprehensive city demonstration program," an action plan which will pull together all federal aids, plus public and private resources, into a coordinated attack on the hardcore problems of entire neighborhoods or sections of cities. Second, the Act requires adequate administrative machinery to assure that the local program can be carried out on a coordinated and consolidated basis, all agencies contributing to such program to be tied together through adequate administrative machinery. Third, the Act provides for special demonstration grant funds which can be used to fill program gaps, to carry out new techniques and approaches, and to help the city meet its share of increased federal assistance programs. These special grant funds would be up to 80% of the non-federal contribution to federal grant-in-aid programs undertaken in connection with the comprehensive demonstration program. These grant funds are designed to become a powerful incentive for cities to use federal programs in a coordinated manner at the local level.

A comprehensive city demonstration program is eligible for assistance under Title I of the Act if it satisfies certain specified criteria. These are spelled out at length in the Act, but very briefly are that: (1) Physical and social problems in the area covered by the program are such that a comprehensive city demonstration program is necessary to carry out the policy of the Congress as expressed in the Act. (2) The program is of sufficient magnitude as to make a substantial impact on the physical and social problems and to remove or arrest blight and decay in entire sections or neighborhoods and to contribute to the sound development of the entire city. (3) The program, including rebuilding or restoration, will contribute to a well-balanced city with a substantial increase in the supply of standard housing of low and moderate cost, maximum opportunity for housing choice, adequate public facilities and commercial facilities, together with ease of access between residential and employment areas. (4) The various projects and activities to be undertaken are scheduled to be initiated within a reasonably short period of time; that adequate resources are, or will be available for completion; and that local administrative machinery is available for carrying out the program on a consolidated and coordinated basis. (5) The program meets such additional requirements as the Secretary of the Department of Housing and Urban Development may establish to carry out the purposes of the Act.

Other Titles cover Planned Metropolitan Development (II); F.H.A. Insurance Operations (III); Land Development and New Communities (IV); Mortgage Insurance for Group Practice Facilities (V); Preservation of Historic Structures (VI); Urban Renewal (VII); Rural Housing (VIII); Urban Information and Technical Assistance Services (IX); and Title X covers miscellaneous changes and revisions in previous acts in the subject area.

A copy of the Act (Public Law 89-754) is available from the Superintendent of Documents, U. S. Government Printing Office, Washington, D. C. 20402, price 5 cents.

RESEARCH MATERIALS AND METHODS

Information Services in Urban Economics (ISSUE)

A new agency called ISSUE was inaugurated February, 1967, by the Communication Service Corporation in Washington, D. C., in cooperation with the Institute for Urban and Regional Studies of Washington University, St. Louis, Missouri. Initial activities include a bi-monthly newsletter, News in Urban Economics, semi-annual collections of literature reviews, Reviews in Urban Economics, and a reprint service. The latter publication reviews and evaluates major research areas in urban economics; the first contains news of current research activities throughout the country, serving to alert researchers to information available from governmental agencies, metropolitan transportation studies, and other data sources.

Water Research

Northern California's Water Industry, The Comparative Efficiency of Public Enterprise in Developing a Scarce Natural Resource. Joe S. Bain, Richard E. Caves, and Julius Margolis, Johns Hopkins Press, Baltimore, Maryland, January 25, 1967, 784 pp. \$15.00 per copy.

This book describes the public and private components of the area's water industry, outlines their pattern of conduct, and evaluates their performance.

Water Research. Edited by Allen V. Kneese and Stephen C. Smith, Resources for the Future, Inc., published by Johns Hopkins Press, Baltimore, Maryland, January, 1967, 534 pp. \$12.50 per copy

More research into the country's water problems is being conducted than ever before. The extent of progress thus far, and the most promising areas of research are shown in this book, a collection of twenty-six papers describing recent and continuing work in each field of study bearing on water resources. The following aspects are included: economic analysis; problems of management and evaluation; water reallocation; political and administrative problems; hydrology and engineering; and suggestion of lines along which further research should be conducted.

RFF Recreation Study

Economics of Outdoor Recreation. Marion Clawson and Jack L. Knetsch, Resources for the Future, Inc., published by Johns Hopkins Press, Baltimore, Maryland, January, 1967, 356 pp. \$8.50 per copy.

In response to the fact that time spent by Americans in outdoor recreation increased more than forty times between 1900 to 1950, and is predicted to grow forty to fifty times between 1960 and 2000, this publication studies broad aspects of the economics of outdoor recreation. Covered in the book are the following topics: the demands for outdoor recreation; recreational resources; and economic consideration and outdoor recreation for the future.

RFF Environmental Quality Study

Environmental Quality in a Growing Economy. Edited by Henry Jarrett, Resources for the Future, Inc., published by Johns Hopkins Press, Baltimore, Maryland, December, 1966, 184 pp. \$5.00 per copy.

In this collection of essays, twelve scholars examine a few of the leading problems of environmental quality, analyze present situations, and future prospects, and suggest what might be done about them. Topics covered in the book include: resources development and the environment; environment and human health; beyond the market mechanism; economic research in problems of environment; public attitudes on environmental quality; and needed improvements on policies and institutions.

ACIR Governmental Research

Metropolitan America: Challenge to Federalism. U. S. Advisory Commission on Intergovernmental Relations, Washington, D. C. 20575, November, 1966. Available upon request.

This publication draws upon the many urban studies and recommendations made over the past seven years by the Advisory Commission on Intergovernmental Relations. Among the problems studied by the Commission and included in the report are: governmental structure and organization; the performance of specific urban functions; alternative approaches to governmental reorganization in urban areas; the impact of federal urban development programs; metropolitan, social, and economic disparities; intergovernmental responsibilities for water supply and sewage disposal; and the relocation hardships of people and businesses displaced by governmental action.

Planning

Planning, Aspects and Applications. Melville C. Branch, John Wiley and Sons, New York, New York, 1966

This book reviews the emergence and present state of planning as a crucial activity in the conduct of human affairs. The four main areas of application studied include: project; city; corporate (business); and military planning. Different aspects of planning, ranging from land use and law to mathematical simulation and psychological factors, are selected to illustrate these applications.

Federal Statistics Directory

Directory of Federal Statistics for Local Areas, A Guide to Sources, 1966
Compiled by the Bureau of Census, U. S. Department of Commerce, available from the Superintendent of Documents, U. S. Government Printing Office, Washington, D. C. 20402, 164 pp. \$1.00 per copy.

This comprehensive inventory explains where to look for data buried in 182 publications of 33 federal agencies and departments; tells how much information is available in different subjects; and indicates which small areas are shown separately for these subjects. The publication includes a detailed subject index and bibliography.

Transportation

Validity of Urban Transportation Study Data, Highway Research Record No. 141.

Highway Research Board, available from Publications Department 805, 2101 Constitution Avenue, N. W., Washington, D. C. 20418, December, 1966. \$1.80 per copy.

The validity of data and methods used in urban transportation studies are reviewed and criticized in this publication. The four major papers in the book discuss research on trip lengths, trip purpose, trip making decisions and land use, since all of these factors are used by transportation researchers in evaluating and forecasting demands placed on urban transportation facilities.

Approaches to Evaluating Urban Transportation Systems, Highway Research Record No. 142.

Highway Research Board, available from Publications Department 805, 2101 Constitution Avenue, N. W., Washington, D. C. 20418, March, 1967, 71 pp. \$1.60 per copy.

Debate on various approaches to the evaluation of urban transportation systems is recorded in this publication. Five papers are included, covering the following topics: the strategies and techniques for producing alternative transportation plans; defining the criteria used for evaluation in urban transportation systems; a methodology for evaluating costs and benefits of alternative systems; and how computers can be used in the transportation process.

BIBLIOGRAPHIES AND RELATED SERVICES

Transportation

Bibliography on Parking--Selected References, 1966, Bibliography No. 44. Highway Research Board, available from Publications Department 805, 2101 Constitution Avenue, N. W., Washington, D. C. 20418, 25 pp. \$1.20 per copy.

This bibliography contains 137 annotated references to articles and books published in 1965 and 1966 relevant to parking. Topics such as curb parking and off-street parking, meters, and facility design and study reports are included. Indexes are provided for author, subject, and geographic area concerned.

Automation for Governmental Agencies

Automation in the Public Service: An Annotated Bibliography. Public Administration Service, 1313 E. Sixtieth Street, Chicago, Illinois, 1966, 70 pp.

This selected bibliography is designed to service governmental agencies, especially in state and local governments. It considers the application of automation at every level and function of government, but limits attention to such items as design and construction of the equipment of automation, physical process control systems and equipment, and military, industrial or business application of automation. The publication is divided into four sections: a classification and coding system; an annotated bibliography; an author index; and a subject index.

Economics and Administration

Research and Regions, A KWIC Indexed Bibliography. John C. Murdock and Judith Graves, Research Center, School of Business and Public Administration, University of Missouri, Columbia, Missouri, 1966, 211 pp. \$5.00 per copy.

This unannotated bibliography has two objectives. First, it provides bibliographic material for certain specialized areas in economics and administration. Secondly, it applies recently developed computerized techniques for information search and retrieval to material in the fields of economics and administration. The book is divided into three parts: key word listings; author-alphabetized bibliography; and author-cross reference. The key word listings include the following: analysis of research and development; administration of research and development; accounting for research and development; scientific method; information, communication, and diffusion theory; regional economics and location theory; and production, costs, and their measurement.

Water Resources

Bibliography on Socio-Economic Aspects of Water Resources. Battelle Memorial Institute, Columbus, Ohio, sponsored by Office of Water Resources Research, U. S. Department of the Interior, 1966, 453 pp.

This bibliography reviews the literature pertaining to the economic aspects of water. It focuses on the time period from 1955 to 1965, and includes literature in the following areas: the supply and demand of water; methods and applications of cost/benefit analysis; economic impact of water resources and water development projects; and methods of determining economic values of sport fisheries, wildlife and other aquatic outdoor recreational resources. The publication includes 770 abstracts, and an author and a subject index.

Industrial Location

Industrial Location: A Review and Annotated Bibliography of Theoretical, Empirical and Case Studies, RSRI Bibliography Series No. 3 Benjamin H. Stevens and Carolyn A. Brackett, Regional Science Research Institute, G. P. O. Box 8776, Philadelphia, Pennsylvania 19101. \$4.75 per copy.

About 900 references with emphasis upon review of local and industry case studies and public policies influencing location.

Government and Politics

Metropolitan Communities: A Bibliography with Special Emphasis on Government and Politics: Supplement, 1958-1964. Compiled by Barbara Hudson and Robert H. McDonald, sponsored by the Institute for Governmental Studies, University of California (Berkeley), published by the Public Administration Service, Chicago, Illinois, 1967, 536 and xii pp. \$10.00 per copy.

This is the second supplementary volume to Metropolitan Communities; A Bibliography and Metropolitan Communities. It follows Metropolitan Communities; A Bibliography Supplement 1955-1957. (See Digest 13-1, p. 122.) The new volume contains references to more than 6,000 books, periodical articles, bibliographies, surveys, and studies of American metropolitan areas published between 1958 and 1964. The following subjects are included: governmental functions and problems; governmental organization; politics in metropolitan communities; and the socio-economic background of metropolitan communities--social structure and process, population, and metropolitan economy.

CONFERENCE

International Federation for Housing and Planning

The International Federation for Housing and Planning will conduct a conference in West Berlin, August 27-September 1, 1967. For further information write: International Federation for Housing and Planning, 43 Wassenaarseweg, The Hague, Netherlands.

AGENCIES AND LOCATIONS

For the convenience of our readers, those agencies conducting the projects carried in this issue of the Digest are listed below along with their locations.

American Public Works Association - 1313 E. 60th St., Chicago, Illinois 60637.

University of Arizona - Tucson, Arizona 85721.

Baltimore County Office of Planning and Zoning - 111 W. Chesapeake Ave., Towson, Maryland 21204.

Battelle Memorial Institute - Columbus, Ohio 43200.

Baylor University, College of Medicine - 1200 Moursund Ave., Houston, Texas 77025.

Brown University - Providence, Rhode Island 02912.

University of California - Berkeley, California 94720.

University of California - Los Angeles, California 90024.

University of California - San Francisco, California 94122.

University of Chicago - Chicago, Illinois 60637.

Chicago, Mayor's Committee for Economic and Cultural Development - Chicago Civic Center, Room 302, Chicago, Illinois 60602.

Columbia University - 605 W. 115th St., New York, New York 10025.

University of Connecticut - Storrs, Connecticut 06268.

Cornell University - Ithaca, New York 14850.

University of Delaware - Newark, Delaware 19711.

Florida State University, Urban Research Center - Titusville, Florida 32780.

Fordham University - Bronx, New York 10458.

Georgetown University - Washington, D. C.

Georgia Institute of Technology - Atlanta, Georgia 30332.

Harvard University - Cambridge, Massachusetts 02138.

University of Hawaii - Honolulu, Hawaii 96814.

Highway Research Board - 2101 Constitution Ave., N. W., Washington, D. C. 20418.

State of Illinois, Illinois State Water Survey - P. O. Box 232, Urbana, Illinois 61801.

University of Illinois - Urbana, Illinois 61801.

University of Indiana - Bloomington, Indiana 47401.

Institute for Community Studies - 2300 Holmes, Kansas City, Missouri 64100.

Institute for Local Self Government - Hotel Claremont Building, Berkeley, California 94700.

Institute of Public Administration - 55 West 44th Street, New York, New York 10036.

Joint Center for Urban Studies of Harvard and Massachusetts Institute of Technology - 66 Church St., Cambridge, Massachusetts 02140.

Kansas State University - Manhattan, Kansas 66502.

Kent State University - Kent, Ohio 44240.

Arthur D. Little, Inc. - 25 Acorn Park, Cambridge, Massachusetts 02140.

Loyola University, Center for Research in Urban Government - 820 North Michigan Ave., Chicago, Illinois 60611.

Loyola University, Department of Chemistry - 6225 N. Sheridan Rd., Chicago, Illinois 60626.

Metropolitan Planning Commission - Nashville, Tennessee 37200.

State of Michigan, Department of State Highways - Stevens T. Mason Building, Lansing, Michigan 48926.

Michigan State University - East Lansing, Michigan 48823.

City of Minneapolis, Water Works - 221 City Hall, Minneapolis, Minnesota 55400.

University of Minnesota, Agricultural Experiment Station - St. Paul, Minnesota 55101.

University of Minnesota, School of Public Health - Minneapolis, Minnesota 55455.

University of Missouri - Columbia, Missouri 65202.

Montana College of Mineral Science and Technology - Butte, Montana 59701.

National Planning Association - 1606 New Hampshire Ave., N. W., Washington, D. C.
20000.

University of New Hampshire - Durham, New Hampshire 03824.

New Mexico State University - University Park, New Mexico 88070.

City of New York, Board of Education, Office of Educational Research -
110 Livingston St., Brooklyn, New York 11201.

City of New York, Housing and Redevelopment Board - New York, New York 10000.

New York, Suffolk County, Community Development for Youth - 26 W. Jericho Turnpike,
Huntington Station, New York 11747.

City University of New York, Hunter College, Project TRUE - 695 Park Ave.,
New York, New York 10021.

New York University, Department of Meteorology and Oceanography - Bronx, New York
10400.

New York University, Graduate School of Public Administration - Washington Square,
New York 3, New York 10003.

State University of New York, Graduate School of Public Affairs - Sayles Hall,
179 Partridge Street, Albany, New York 12203.

University of North Carolina, Department of Civil Engineering - Raleigh,
North Carolina 27600.

University of North Carolina, School of Public Health - Chapel Hill, North Carolina
27515.

North Dakota State University - Fargo, North Dakota 58100.

Northwestern University, Transportation Center - Evanston, Illinois 60204.

Ohio State University - Columbus, Ohio 43210.

University of Oregon - Eugene, Oregon 97403.

University of Pennsylvania - Philadelphia, Pennsylvania 19104.

Pennsylvania State University - University Park, Pennsylvania

University of Pittsburgh - Pittsburgh, Pennsylvania 15213.

Pittsburgh History and Landmarks Foundation - 906 Benedum-Trees Building,
Pittsburgh, Pennsylvania 15222

University of Puerto Rico - Rio Piedras, Puerto Rico.

Purdue University - Lafayette, Indiana 47907.

The Rand Corporation - 1700 Main St., Santa Monica, California 90406.

Regional Science Research Institute, Philadelphia Office - G. P. O. Box 8776,
Philadelphia, Pennsylvania 19101.

University of Rhode Island - Kingston, Rhode Island.

Rutgers - The State University - New Brunswick, New Jersey 08903.

Catholic Charities of St. Louis - Cardinal Ritter Institute - 4532 Lindell Blvd.,
St. Louis, Missouri 63100.

San Diego State College - San Diego, California 92115.

Sarah Lawrence College - Bronxville, New York 10708.

Southern Research Institute - 2000 Ninth Ave., South, Birmingham, Alabama 35200.

Texas Hospital Association - P. O. Box 45531, Austin, Texas 78751.

University of Texas - Austin, Texas 78712.

Texas Technological College - Lubbock, Texas 79400.

Iri-County Regional Planning Commission - 578 W. Market St., Akron, Ohio 44303.

Iri-State Transportation Commission - 100 Church Street, New York, New York 10007.

Twentieth Century Fund - 41 E. 70th St., New York, New York 10021.

United States Government - For departments of the federal government and their
branch offices, see individual abstracts for specific addresses.

Virginia Polytechnic Institute - Blacksburg, Virginia 24061.

Washington University - St. Louis, Missouri 63130.

Wayne State University - Detroit, Michigan 48200.

West Virginia University - Morgantown, West Virginia 26506.

Wilkes College - Wilkes-Barr, Pennsylvania 18703.

Yale University - New Haven, Connecticut 06500.

BELGIUM

Centre National de Criminologie - 1 Rue Abbe Cuypers, Brussels 4, Belgium.

CANADA

University of British Columbia - Vancouver 8, Canada.

ENGLAND

University of Sheffield - Shearwood Rd., Sheffield 10, England.



AVAILABLE BACK ISSUES OF RESEARCH DIGEST

A few copies of the back issues below are still available. Vol. 9, No. 1 may be purchased at \$1.00 per copy. Beginning with Vol. 12, the price is \$2.00 to individuals and \$3.00 to organizations.

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|---------|-------|-------------------------|
| Vol. 9 | No. 1 | April, 1962 |
| Vol. 12 | No. 2 | Fall, 1965 |
| Vol. 13 | No. 1 | Spring and Summer, 1966 |
| Vol. 13 | No. 2 | Fall and Winter, 1966 |

A few copies of the Indexes to Volume 9, Volume 10, Volume 11, Volume 12, and Volume 13 are also available at \$1.00 each.

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Research Digest

Volume 14

Number 2

Fall and Winter, 1967

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Hans Blumenfeld, Donald J. Bogue, Henry Cohen, Donald L. Foley, Richard L. Meier and William L.C. Wheaton.

Editorial Notes

As described elsewhere, many changes have been made in this issue of the Digest. Much time and thought have, of course, gone into those changes. We hope they will make the publication increasingly useful to its readers. In view of the magnitude and complexity of the area with which we are dealing, however, no one can be infallible. Comments and suggestions, therefore, will be doubly appreciated. (SK)

Founded in 1954 by an informal organization known as the Urban Planning Research Group, the Research Digest is prepared and distributed semi-annually by the Bureau of Community Planning of the University of Illinois. Its objective is to serve as a medium of communication among individuals and groups engaged in urban and regional research. Abstracts are invited covering research projects recently initiated, projects well underway on which significant progress or findings can be reported, and projects recently completed. Brief notes on items of interest to researchers in this field are also desired, as are special articles in keeping with the character of the publication. Subscription is \$4.00 per year for individuals and \$6.00 for organizations. Address all communications to Research Digest, Bureau of Community Planning, University of Illinois, 1202 West California Avenue, Urbana, Illinois 61801.

R e s e a r c h D i g e s t

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EDITORIAL ANNOUNCEMENT

In our previous issue, we indicated that thought was being given to revamping the Digest to make it more useful to its readers. The principal changes mentioned were arrangement of abstracts on a subject matter basis, and broadened geographical coverage. These changes, together with certain others discussed below, have now been worked out and are embodied in the present issue.

Turning first to the arrangement of material, previously we presented abstracts by the agency where the work was being carried out. But, as the volume of research reported grew, in response to the growth of activity in the Digest's area of interest, this system became less and less satisfactory. The subject arrangement now adopted is a hierarchical one, the rationale for which is set forth briefly in the special article which follows. Surprising as it may seem at first glance, the classification does not represent any widening of the horizons of the Digest, but is based, rather, on a careful review of research on which we have reported over the past three years. Each abstract appears only once, in the category which seems most appropriate. However, since these projects are frequently, if not usually, of interest in more than one context, we have also included a set of cross references.

The second principal change is in geographical coverage. Originally the Digest was developed to report on research in the United States. Later its coverage was extended to include Canada. Now a start is being made on bringing to our readers reports on relevant research in other parts of the world as well.

There are many reasons for seeking this broader perspective. In the first place, the planning and development of urban areas and regions is becoming a matter of vital concern throughout the world, and this concern is manifesting itself, among other ways, in an increasing amount of research which is of general interest. Secondly, as several reports elsewhere in this issue indicate, there is growing interest in the exchange of information and experience, through inter-visitation by individuals and groups, through exchange of publications, through joint

research projects, and more recently through efforts to enlarge international channels for the dissemination of information. We believe that this is a healthy, indeed a needed and inevitable trend, and that each country and area has much to learn from its neighbors and contemporaries in dealing with urban and regional problems of mutual interest. We would like to make whatever modest contribution we can to the furtherance of this trend.

In this task, we expect to be assisted by a number of correspondents. Several organizations and individuals have already expressed their willingness to serve in this capacity, and we have listed their names at the end of the magazine.

A third change is in content. In the strictest sense, what we are undertaking here is not so much a change as a shift of emphasis. As before, we will not report all urban and regional research, but will seek that which contributes to general knowledge, or suggests innovative techniques, or is, for whatever reason, of special interest. But whereas in the past we have concentrated primarily on research in process, now we will place more emphasis on coverage of recently published work as well, regardless of whether we have reported on it previously. In effect, the effort becomes one of attempting, within limits of time and resources, to monitor the growing edge of knowledge about urban areas and regions, wherever the knowledge may be developed.

The listing of project titles by agency which formerly appeared as the table of contents is now carried as an index. For added convenience, the agencies in this index have been grouped by geographical areas. We have also continued the alphabetical listing of agencies and addresses, and have, in addition, included an alphabetical listing of persons.

The form of the abstracts has been modified slightly to improve readability, as well as to save space. In the form as now used, "a" indicates the principal investigator or project director, "b" indicates the status of research and publications, "c" indicates the agency carrying out the research, together

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with the sponsorship if given, and "d" indicates the previous Digest report, if any. The initials at the end of the abstract indicate the person preparing it, or, if this is not known, then the source from which it has been obtained. Where for any reason, the full name of a person is not known to us, we have used the initial "m" in conjunction with his surname.

In conclusion, we would like to express again our appreciation to the National Science Foundation and to Resources for the Future, Inc. for their support of our efforts to improve the Digest. We are also deeply grateful to the many individuals who have given so generously of their time, in personal conversation, by correspondence, and in many other ways, as their contribution to this venture. The list is far too long to spell it out at this point. Nevertheless, we want each one of them to know how much we appreciate his or her assistance.

In view of the growth of the Digest, and the increasing amount of research which should be reported, more frequent publication would be desirable. We are currently exploring this possibility and will report to our readers at an appropriate time in the event of a favorable outcome. (SK)

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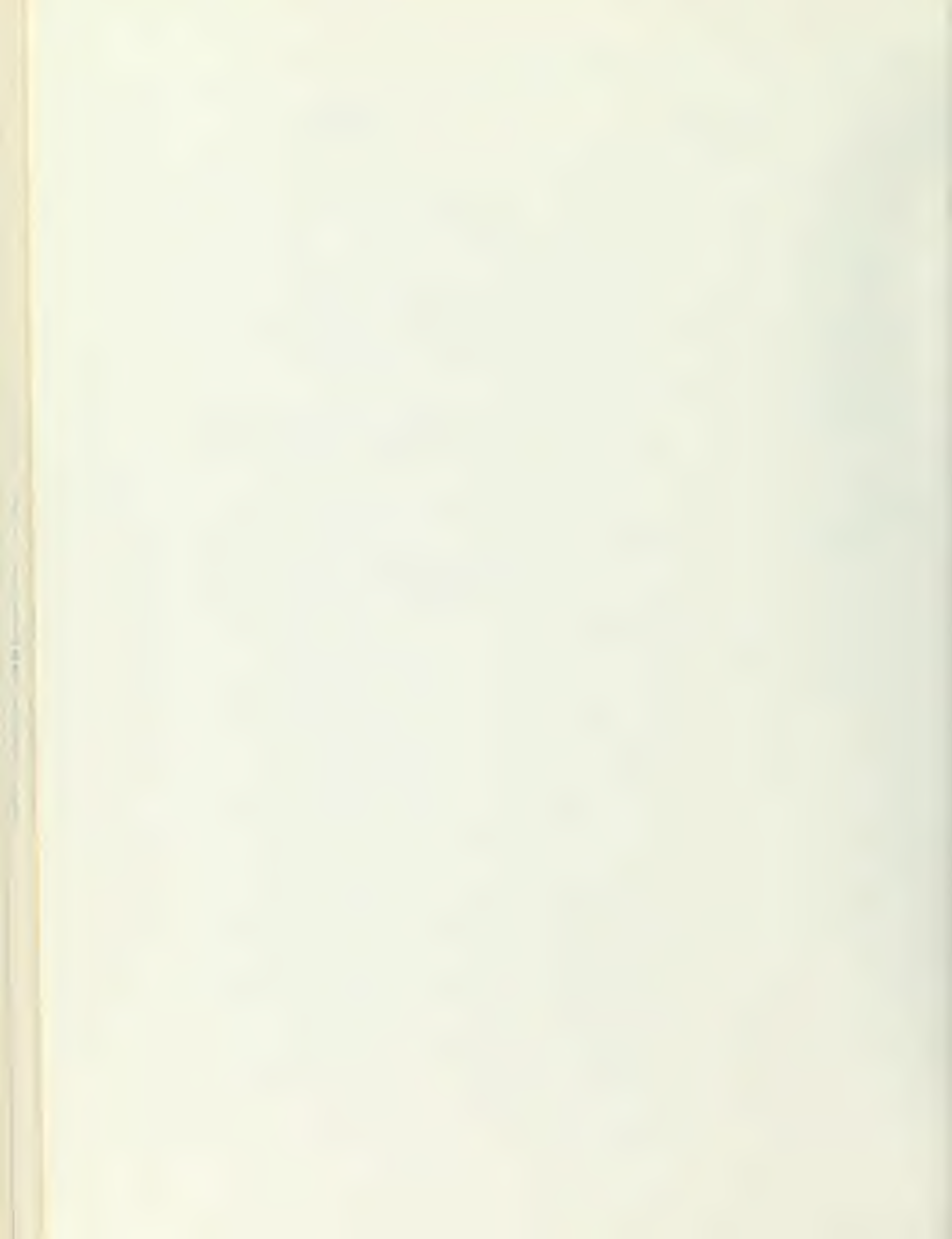
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FOCAL POINTS IN URBAN RESEARCH

Scott Keyes

(The following paper was delivered by the author at a Conference on Cooperation and Communication in Urban Research, held at City University of New York, February 1, 1967.)

Any review of the present focal points of urban research must start with some sort of conceptual framework of the field. For purposes of discussion, it is suggested that there are five principal elements or dimensions of such a framework. These are first, the type of agency or group conducting the research; second, the subject area which is under study; third, the direction of approach which is being taken to the subject; fourth, the geographical context within which the study is being carried out; and fifth, the purpose for which the study is being conducted.

Enlarging on this conceptual framework slightly, one can say that urban research is being conducted by many kinds of agencies and groups: public bodies at all levels of government, federal, state and local; and various sorts of nongovernmental organizations, including college and university groups, professional and similar societies, and foundations.

The subjects to which these agencies and groups are addressing themselves cover, of course, a very broad range, but again for purposes of discussion, they can be grouped into half a dozen major categories: environmental factors, the people of an area, the economy of an area, social functions and requirements, land use and transportation, and government.

First, we have research relating to environmental factors--subjects such as air and air pollution, rainfall and runoff, water supply and quality, land considered in terms of geological structure or soil characteristics, and natural resources such as vegetative cover, minerals, and wildlife.

Second, we have research relating to people--matters such as their numbers and characteristics, past, present, and future; their physical and social mobility; their systems of values and social organization; their well being in terms of employment, unemployment, family income; patterns and causes of social disorganization.

Third, there is research on the urban economy--the total economy of an area, sometimes referred to as its "economic base"; particular aspects of economic structure or function; the sensitivity of the economy to fluctuations or dislocations.

Fourth, many researchers are studying various social facilities and needs--housing, education, health, welfare, recreation, whether in total terms, or in terms of the needs of particular groups, such as the aged, youth, or minorities.

Fifth, since all of these economic and social functions require space, in terms of amount, location, and accessibility, we have much research relating to land use and transportation.

Finally, sixth, government being essential to the conduct of human affairs, there is research where government itself is the subject of a study.

The directions of approach which are being followed in these studies also vary rather widely. Some--an increasing number--are difficult to categorize because they involve approaches such as ecological studies or systems analyses which go beyond the more traditional disciplines. With these exceptions we can say that there are two principal kinds of approaches, socioeconomic

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and technical. The socioeconomic approaches involve the social and behavioral sciences generally--disciplines such as economics, political science, sociology and anthropology, psychology and psychiatry. The technical approaches involve other kinds of professional training and skills, such as the biological sciences, chemistry, architecture, or engineering. Most of the subjects just mentioned lend themselves to study in one way or another from these different points of view.

With respect to the geographical context within which these many kinds of subjects are being studied from these various points of view, again there seem to be some patterns. Perhaps the first thing which needs to be said is that urban research doesn't begin with, or end with, a particular concentration of people which we call a city or an urban area. For one thing, some urban research has to do with patterns of urbanization over large areas. For another thing, the roots of a city or urban area go deep into its hinterland, as anyone in New York who lived through the power blackout or has experienced the recurring water crises of recent years knows full well.

Even at the urban area level, research takes place in differing geographical contexts. Much research--again an increasing amount--is being directed at the urban area as a whole, usually referred to as the metropolitan level. But there is also a great deal of research directed at significant parts of the urban area: various political entities such as central city, suburb or satellite; or other kinds of sub-areas as defined for purposes of the study in hand, such as communities and neighborhoods, central business districts, blighted areas, rural-urban fringes, or new towns.

Finally, with respect to purpose, one can distinguish among three principal kinds. First, there is the effort which is concerned principally with data collection and the provision of information. Many people would say that this is not research. It is included in the present context because it is a front on which more work will be needed as urban research in general grows and develops. Much thought and effort are, of course, currently going into the assembly, collation and management of large amounts of statistical and related information

through so-called "data banks."

A second purpose, apparently less frequent than others these days but one which some of us hope will come to play an increasingly significant role in the urban picture is basic research--research which is not tied to some immediate administrative purpose but is intended solely to add to the general body of knowledge about urban areas and their characteristics and problems.

The third principal kind of purpose is administrative. A large part of our urban research is directed at some administrative purpose, public or private. Some of the administrative research could be characterized as managerial--i.e., having to do with activities already underway. Some of it could be characterized as developmental--i.e., having to do with planning, programming, and budgeting for new activities to be undertaken in the future, including economic and social development programs, as well as programs which are heavily but by no means exclusively physical in character, such as highway networks, urban renewal or new towns.

A last type of administrative research which might be mentioned is the demonstration project. Here is the testing ground for new ideas, possible directions of policy which, if proven out in practice will eventually, on a larger scale, reach the developmental and managerial stage. Much urban research serves this kind of purpose, and some imaginative things are being done under the demonstration project aegis.

These, then, are the principal elements of the conceptual framework suggested here for urban research--who is studying what and how, in what geographical context and for what purpose. In terms of this framework, the remainder of this paper comments briefly, for illustrative purposes, on what appear to be some significant areas of research concentration, and concludes with a few observations on possible future trends in the field.

As mentioned earlier, the urban area as a whole--the metropolitan area--is getting an increasing amount of attention, partly because of the logic of circumstances, partly because of pressure in this direction from the Federal government. Among the significant subject areas at this level are the overall economic base; overall population analyses and projections; overall

land use and transportation frameworks; studies of environmental problems such as air and water pollution; the logical distribution of functions, local and area wide; problems arising from economic and racial disparities between central city and suburb; and intergovernmental relations generally. New techniques, data sources and concepts are being developed in the course of this activity.

Partly in order to bring out some interesting contrasts in patterns of research concentration, let us turn next to the sub-area level: the level of the community and neighborhood, the central business district, the blighted area, the rural-urban fringe. The contrasts are about what you might expect when you set the metropolitan level off against its smaller component parts.

At the metropolitan level the interest is on the big-picture--the overall economic or demographic projection; the overall urban growth pattern; the overall distribution of public functions and responsibilities. At the smaller level the concentration is more on physical and social phenomena as we tend to experience them in our daily lives. At the metropolitan level the individual is a statistic, with certain propensities for being born, reproducing, moving around, dying. At the sub-area level the individual becomes a person--a human being with thoughts, feelings, values, needs, patterns of behavior both as an individual and as a member of a group. At the metropolitan level, land use is a statistic, with certain propensities for generating traffic or requirements for services or public revenues and expenditures. At the sub-area level land use is a matter of vivid experience--something to be seen, felt, heard, smelled, lived with, designed or redesigned as needed to provide an ever more adequate environment for the conduct of human affairs.

There is, of course, no intent here to make an invidious comparison. Both kinds of research are necessary to understand the urban area and its problems.

At the community and neighborhood level, one can see two kinds of focal points worthy of comment: first, that research which deals with characteristics and needs of the community and neighborhood as a whole; and second, that research which deals with some of its elements, such as housing, health, education, welfare and recreation.

With respect to the former, some of the significant focal points to be observed are the probings of the sources of a sense of community; the efforts to gauge social bonds, particularly in renewal areas; the causes and processes of social stratification; family values and family disorganization; the special problems of migrants; the design and evaluation, for practical purposes, of systems of social analysis which can be useful in connection with developmental programs. Community and neighborhood design is another important focal point, whether in visual terms, or in functional terms--the kinds, amounts and distribution of facilities needed for a viable and satisfying human environment.

At the level of particular needs or services, in housing, one thinks of research on housing choices and patterns; on the problems of measuring housing quality; on the social, economic and technical and administrative problems of providing or improving housing, including the troublesome problems of relocation. In education, one thinks of work in the social and cultural factors involved in providing education, or in school achievement; in the design, administration and financing of school systems; the changing role of the neighborhood school; the possibilities of the educational complex; of work on policy making and conflict resolution.

In health, one thinks of the epidemiological studies of physical and mental illness; of the careful planning going into the effort to provide fully adequate systems of health services. In welfare, one thinks of the probing of the nature and causes of poverty and dependency and the social and economic barriers to security; of the work connected with the development of social planning, and the involvement of the poor themselves in this planning. One thinks of the growing work in law enforcement, in research on patterns and causes of crime and delinquency, police-community relations, the whole gamut of problems connected with the administration of justice.

Most of the above research interests we tend to think of in association with the problems of communities and neighborhoods in the inner metropolis. However, it should be remembered that on the rural-urban fringes consideration is being given to some rather specialized and different kinds of social, economic, physical and administrative problems arising out of the impact

of urban growth on rural areas and communities. Also, there are other kinds of situations: the new towns, where research and planning directed at the total human environment may have its finest hour; or the central business districts and other core areas, with their concern for dispersal of functions, changing economic and social character, and the legal, design, financial and other aspects of development and redevelopment.

Between the metropolitan area as a whole on the one hand and its various component sub-areas on the other is another level--an intermediate level which constitutes the last set of focal points to be mentioned here. In general, this might be said to be the municipal level: the problem of the central city or cities or other political jurisdictions which must struggle continuously to adjust to the needs of the sub-areas of which they are comprised on the one hand while at the same time relating themselves to the larger urban community of which they are a part on the other. Here, the focal points are necessarily political and administrative: the constitution, organization, financing and management of political entities; the role of elites, power blocs, political parties, the media of communications; the administration of development programs; the planning and programming of public works; the use of the police power.

These, then, are some of the focal points one can see as he tries to find out what urban researchers are doing.

What can one say about the immediate future of urban research? Prediction is, of course, hazardous and different people will have different anticipations, depending on their particular interests, backgrounds, biases, prejudices and other limitations. However, certain directions of movement can be suggested which may come about, in lines of study, in methods, in emphases, in auspices. At one end of the spectrum, despite the well known difficulties of guiding and implementing national and regional urban growth patterns and policies, it seems likely that an increasing amount of thought will be given to this subject--to the study of alternative regional urban growth models and their implications as a means of relieving population pressure on some of our larger urban areas. At the other end of the spectrum will be increasing search for central issues in developing the technologies, social and political procedures, governmental programs and

administrative practices to cope with high density as an inescapable phenomenon of the inner metropolis.

The inter-disciplinary approach should continue to grow, and longitudinal studies, involving the sustained study of given phenomena over periods of time, should become more numerous. Cost-benefit analysis will be an increasingly important theme; indeed, this emphasis is already specified in the Model Cities Act. Likewise growing attention will be paid to the social and economic impacts of developmental programs. We have had a spate of studies dealing with physical impacts, particularly in connection with the highway program. But we need to know more (and again, Congress has said we must know more) about the social and economic impacts of developmental activities, which may frequently be more subtle and difficult to research.

Some comment is in order, also, on the need for evaluative studies. There is some research of this sort going on, of course, but one can't help getting the impression, as he scans the field, that in our rush to get grants to subsidize our activities, we may have become overly concerned with someone else's problems, particularly administrative. More work in the nature of candid and independent appraisal of activities of various kinds would be beneficial.

Also, at this time, it seems possible that sooner or later two new institutional presences may emerge to crystallize and give direction to this burgeoning field. At least they are being increasingly talked about whenever two or three are gathered in the name of urban research. One is a National Institute of Urban Studies of some sort, adequately funded and staffed to bring leadership at the Federal level to a substantial research and development effort commensurate in magnitude with our urban problems.⁽¹⁾ The other is a network of Urban Observatories, bringing together the resources of universities and governments in particular metropolitan areas, each focussing on the problems of its own locality, but working, nevertheless, in concert with its counterparts in other areas so that the findings of all can be utilized as relevant throughout the system.

These may be some of the developments that lie immediately ahead. But whatever the shape of the future of urban research, it is going to be a very lively one, full of

fascination for all of us.

(1) On December 6, President Johnson announced the appointment of a six-man committee to prepare plans for a National Institute for Urban Development. Also, in August of this year, the Department of Housing and Urban Development entered into a contract with the National Academies of Science and of Engineering to develop a national strategy for urban research. (See Brief Mention, page 108 this issue. See also Keyes, Scott, "Toward a National Urban Research Program." University of Illinois, Bureau of Community Planning, Newsletter, Vol. 8, No. 1, December, 1967.)

UNITED STATES AND CANADA

I. PHYSICAL ENVIRONMENT

Air

1. EFFECTS OF AIR POLLUTION ON OPTIMUM URBAN FORM

(a) Benjamin H. Stevens and C. Peter Rydell. (b) In process. (c) Regional Science Research Institute and City University of New York, Hunter College, under sponsorship of U. S. Department of Health, Education, and Welfare, Public Health Service. (d) None.

Problem. Develop conceptual models of optimum urban form which take the social cost of air pollution explicitly into consideration. Within this objective, the research will: (1) evaluate the implications of air pollution for optimum urban land use patterns; (2) develop social welfare functions which reflect air pollution costs as well as the costs traditionally assumed to determine urban patterns; (3) refine the system of models used to conceptualize urban form in order to improve the theoretical basis of urban planning. (SIE)

2. ORGANIZATIONAL FACTORS IN AIR POLLUTION CONTROL

(a) Michael E. Eckstein, William C. Kroeger and J. George Longworth. (b) In process. (c) New School for Social Research, Center for New York City Affairs, under sponsorship of U. S. Department of Health, Education, and Welfare, Public Health Service. (d) None.

Problem. Examine and analyze the structure and function of the diverse units and organizations involved in air pollution and its control.

Method. Determine and examine sets of relationships between and among units of government and public agencies at various levels,

and public and private organizations in a multi-state metropolitan region (New York area). Analyze these sets of relationships to define stresses and strains in the air pollution control process. Based on these findings, develop techniques and procedures for alleviating some of the stresses in the current system. (MEE)

3. EFFECT OF AREA ON AIR POLLUTION CONTROL PROGRAMS

(a) Edgar C. Leduc and Samuel M. Baccanari. (b) In process. (c) Pennsylvania State University, Department of Political Science, under sponsorship of U. S. Department of Health, Education, and Welfare, Public Health Service. (d) None.

Problem. Determine the effect of varying territorial size and governmental complexity of enforcing units on the operation of air pollution control programs.

Method. Five governmental administrative systems organized to enforce air pollution codes are being studied. The five units vary in areal size and in governmental complexity as measured by the number of programs administered. Differences in the systems--their complaint, information reception, and storage and retrieval networks--are being compared. The effects of these differences on the control programs will be estimated. (ECL)

4. ECONOMIC ALTERNATIVES TO THE INTERNAL COMBUSTION ENGINE

(a) Robert U. Ayres. (b) In process. (c) Hudson Institute, Inc., under sponsorship of Resources for the Future, Inc. (d) None.

Problem. Explore economic alternatives to the internal combustion engine. The internal combustion engine has become the most important air pollution source in terms of

PHYSICAL ENVIRONMENT

dangers to public health. Moreover, it is a rapidly rising source of property-damaging pollution.

Method. (1) Assemble and analyze technical and cost data on different types of alternative systems now or potentially suitable for powering trucks, buses, and taxis operating in an urban environment. Among these are conventional gasoline engines, gas turbines, fuel cell and storage battery systems. (2) Project the relevant information forward to about 1975 using a methodology for making technical forecasts developed in connection with previous research. (3) Estimate and project cost data on the basis of several alternative assumptions about future market sizes, estimate the effect of enhanced research and development expenditures on the cost and potential of these alternative systems. (4) Investigate methodologies for quantifying the cost associated with noise and air pollution resulting from use of internal combustion engines in cities; make quantitative estimates of these costs to the extent feasible. (5) Formulate conclusions about commercial and industrial transportation systems in cities, and explore the implications for the problem of private automobiles. (SIE)

5. THE ECONOMICS OF AIR POLLUTION CONTROL

(a) Thomas D. Crocker. (b) Final report to be available January 31, 1968. (c) University of Wisconsin (Milwaukee), under sponsorship of U. S. Department of Health, Education, and Welfare, Public Health Service. (d) 13:2-183.

Problem. Study the detrimental effects of air-borne fluorides emanating from phosphatic fertilizer manufacturing processes upon the beef cattle and citrus industries of Polk County, Florida, and the economic efficacy of alternative air pollution control policies.

Method. Actual sales prices of lands polluted by the phosphate materials were used to determine damage.

Findings. A cross-sectional, multiple regression analysis of Polk County agricultural land values resulted in a positive relation for several partitions of years between frequency of pollutant fumigations and the market value of pasture sites, and a negative one for citrus sites.

The phosphate companies appeared to be co-operating with the pollution control authorities by attempting to keep emissions low, or in some cases, buying the affected lands. Negotiations between emitters and receptors appear to be feasible. Constraint by both parties can generate trade gains. If negotiation is not possible, then more direct form of control is necessary. (JS)

6. AIR POLLUTION PROBLEMS IN THE NORTHEAST

(a) B. E. Dethier. (b) In process. (c) Cornell University, Agricultural Experiment Station, under sponsorship of U. S. Department of Agriculture, Cooperative State Experiment Station Service. (d) None.

Problem. Determine the impact of present air contaminants on agriculture of the Northeast, and obtain information prerequisite for development of air quality criteria related to agriculture in the Northeast.

Method. (1) Collect data on air quality and air quality effects for the regional survey of degree and economic importance of air pollution damage to agriculture; (2) apply statistical weather records to estimation of frequency and duration of pollution episodes; and (3) investigate factors underlying changing pollution concentrations in the air mass. (SIE)

7. MESO-CLIMATOLOGY

(a) Frederic A. Godshall. (b) In process. (c) Laboratory for Environmental Data Research, U. S. Department of Commerce, Environmental Sciences Services Administration. (d) None.

Problem. A study in meso-climatology to: (1) indicate areas where medical climatology could be used to advantage; (2) determine how urbanization has changed the climate and how this knowledge can be applied in the future; (3) study reactions of human beings to various weather elements; (4) study how man is changing his environment through such actions as industrialization, land clearing, and air pollution. (SIE)

8. AEROSOL TRACER SYSTEM DEVELOPMENT

(a) George F. Collins. (b) Completed. Further studies will not be initiated because more elaborate and strictly controlled studies of a similar nature have been embarked upon by the U. S. Department of Health, Education, and Welfare. (c) The Travelers Research Center, Inc., as part of "The Environment and Man" program, under sponsorship of The Travelers Corporation. (d) None.

Problem. An inexpensive, direct method for measuring atmospheric diffusion is often needed where conventional prediction equations are not applicable. Object of study was to compare dispersive characteristics of a fluorescent particulate tracer (zinc cadmium sulfide) with a gaseous tracer (sulfur hexafluoride) and to improve techniques for dispersing and collecting both tracers.

Major Findings. Although the study indicated both tracers are dispersed in essentially the same patterns, there seems to be a larger relative loss of fluorescent pigment due to fallout or impingement.

A unique, sequential sampler was developed for the study. Present design makes use of high efficiency membrane filters, but sampler could be adapted for a wet collection system, too. (GFC)

9. LONG-RANGE IMPLICATIONS (PULMONARY FUNCTION) OF AIR POLLUTION

(a) Dwight Kresge and Chris DeGroff. (b) In process. (c) The Travelers Research Center, Inc., and Hartford Hospital, as part of "The Environment and Man" program, under sponsorship of The Travelers Corporation. (d) None.

Problem. To identify quantitative differences in pulmonary function of children chronically exposed to air environments with different levels of pollution.

Method. Thus far, this has been an acute study, with potential of a continuing prospective chronic study. Two matched populations of children--one reared in a grossly contaminated atmospheric environment, the other in a relatively clean environment--will be tested. A rather complete set of pulmonary function tests including pulmonary diffusing capacity will be statistically

analyzed for correlative significance. (DJK)

10. MECHANISMS OF PHOTOCHEMICAL REACTIONS IN URBAN AIR

(a) James N. Pitts, Jr., Harry W. Johnson, John Vernon, and Wayne Morganroth. (b) In process. (c) University of California (Riverside), Department of Chemistry, under sponsorship of U. S. Department of Health, Education, and Welfare, Public Health Service. (d) None.

Problem. Reactions of possible importance in photochemical air pollution of the type first characterized in the Los Angeles basin are being investigated with a variety of techniques in the vapor, liquid, and solid states. Research includes selected aspects of the photochemistry, spectroscopy, and mechanisms of photo-oxidation of certain oxides of nitrogen, aromatic hydrocarbons, N-atom heterocycles, olefins, unsaturated aldehydes and ketones such as acrolein and crotonaldehyde, and other carbonyl compounds with unique structural features.

Method. Gas chromatographic methods utilizing direct, repetitive gas phase sampling are being employed with short (10 cm) and long path (40 meters) infrared techniques (for the mm. and p.p.m. pressure ranges, respectively) to determine the rates of formation of products of direct photolyses and photo-oxidations with atomic and molecular oxygen. Highly sensitive spectroscopic techniques in the vacuum ultraviolet now complement the infrared methods.

The nature and reactivities of the lower excited electronic states and intra- and intermolecular transfer of energy between these states is being investigated through determination of photochemical quantum yields, absorption and emission spectra (fluorescence and phosphorescence), solvent effects on these spectra, and utilization of mass spectrometry, electron spin resonance and flash spectroscopy. (SIE)

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11. ANALYSIS OF ATMOSPHERIC DUST BY ELECTRON OPTICS

(a) Harry U. Rhoads, A. H. Weber, and David K. Bruening. (b) In process. (c) St. Louis University, Department of Physics, under sponsorship of U. S. Department of Health, Education, and Welfare, Public Health Service. (d) None.

Problem. Investigation by means of electron microscopy, electron diffraction, and electron probe microanalysis of air-borne particulates below the range of resolution of the light microscope for the purposes of characterizing and identifying by the above methods. Of particular importance is the sampling of all types of air polluting particulates directly at their source. The samples collected are identified and classified for use in a subsequent survey of the metropolitan area.

Additional investigations contemplated will be directed to: (1) the identification, role, and fate of SO₂ vapors; (2) the study of particulates in automotive exhaust; (3) the determination of the possibility of evaporated metal or nonmetal films as indicators of the presence of specific gaseous pollutants. (HUR)

12. PHYSIOLOGY AND PATHOLOGY OF THE AIRWAYS AND AIR HYGIENE

(a) Donald F. Proctor. (b) In process. (c) Johns Hopkins University, School of Hygiene and Public Health, under sponsorship of U. S. Department of Health, Education, and Welfare, Public Health Service. (d) None.

Problem. Determine the pathological effects of air pollutants in man, both healthy and diseased, under varying environmental conditions.

This is part of the larger Air Hygiene program which investigates problems about maintenance of human health in relation to our atmospheric environment. Since the most extensive and effective contact between man and his ambient atmosphere is through the respiratory tract, maintenance of normal respiratory airways and their mucosal linings are keys to effective air hygiene.

Method. (1) develop techniques for measuring the function of airways, respiratory air flow, and respiratory mucociliary activity; (2) define the ranges of these physiological functions compatible with normal health under varying environmental circumstances; (3) determine the influences which disturb normal function; (4) search for correlations between such disturbances and the pathogenesis of disease. (DFP)

13. ATMOSPHERIC POLLUTION AND ACUTE RESPIRATORY DISEASE

(a) James McCarroll, John Fox, Donovan Thompson, Edward Perrin, Richard Kronmal, Doris Wolter, Isabel Mountain, Judith Diamond, and Eric Cassell. (b) Data collected and being analyzed. (c) University of Washington, School of Medicine, Department of Preventive Medicine, under sponsorship of U. S. Department of Health, Education, and Welfare, Public Health Service. (d) None.

Problem. To determine what variations in health, particularly the presence or absence of respiratory disease, may be related to variations in air pollution.

Method. This study has followed a large group of normal urban residents, representing a reasonable cross section of social and ethnic groups, for a period of three years. Daily variations in health for this population have been recorded. Continuous records of the air pollution to which they were exposed were also maintained. In analyzing the data, a variety of environmental factors in addition to air pollution, as well as other studies of illness patterns in a normal urban population, are being considered. (SIE)

14. RADAR MEASUREMENTS OF THE MIXING LAYER OVER CITIES

(a) Thomas R. Mee, Alan Miller, and E. R. LeBlanc. (b) In process. (c) Atmospheric Research Group, under sponsorship of U. S. Department of Health, Education, and Welfare, Public Health Service. (d) None.

Problem. Develop an operational system to monitor continuously the vertical extent of

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the mixing layer over urban areas. The method pursued is to use a relatively simple frequency-modulated, CW radar, operating at a relatively low frequency, to measure the height of the first inversion layer. The measurement scheme is meant to monitor the meteorological situation and not the existing pollution situation. Thus, information gained should show the height above ground to which pollutants could mix. The device will serve as a tool for obtaining climatological data on pollution potential before pollutants are introduced, and will serve to monitor the "reservoir capacity" of air advecting over a pollution source as well as showing the mixing limit of already polluted air.

A subsidiary aim is to understand the detailed structure of the atmosphere in the vicinity of the inversion, and to understand the mechanisms which cause radar returns from these clear-air portions of the atmosphere. (TRM)

Land

15. SOIL SURVEYS AND LAND-USE PLANNING

(a) L. J. Bartelli, A. A. Klingbiel, J. V. Baird, and M. R. Hiddleson, eds. (b) Completed and published under above title by the Soil Science Society of America and the American Society of Agronomy. Library of Congress Card No. 66-26147. (c) Soil Science Society of America and American Society of Agronomy, with co-sponsorship by American Society of Planning Officials. (d) None.

Problem. With the increasing population and subsequent pressure of urban growth, more and more valuable farm land is being taken over for nonagricultural uses. There is an increasing danger of costly mistakes in locating various structures and facilities on soils ill-suited to the particular purpose. How can planners and soil scientists join forces to deal with future problems relating to comprehensive land-use planning, as well as planning for individual structure sites?

Findings. Soil science is the most recent of the physical sciences to be used in urban planning. Soil capability analyses, although still a new tool for most planners, will

become as basic to planning as the land-use inventory, the traffic count, and the population projection. This publication consists of papers presented at the annual meeting of the Soil Science Society of America and the American Society of Agronomy at Columbus, Ohio, November 1-5, 1965. They examine the use of soil surveys in land-use planning, construction of transportation facilities, recreation planning, preparation of zoning ordinances, and other aspects of urban and regional planning. (ECR)

16. ENVIRONMENTAL GEOLOGY AND LAND-USE PLANNING

(a) Paul L. Hilpman and Gary F. Stewart. (b) Field research completed; manuscript being drafted for publication. (c) State of Kansas, Geological Survey. (d) None.

Problem. To evaluate the role of environmental geology in land-use planning on the city, county, and regional levels. Accelerated urban sprawl throughout the United States has been accompanied by conflict between physical environment and land use. Construction failures, widespread environmental pollution, and unrealized mineral resource reserves in urban areas have resulted in significant economic loss. A pilot project has been undertaken to evaluate land-use suitability as applied to various urban activities (i.e., solid and liquid waste disposal, foundation design, mineral resources development, flood control, water supply, transportation networks, open space and recreational activities). Data will be assembled as a land-use manual including factor and suitability maps.

Hypothesis. Land-use planning decisions on the city, county, and regional bases are generally made by personnel with little or no knowledge of the geologic constraints and opportunities afforded by the area in question. If such information is available for consideration along with the legal, economic, and social factors involved, better utilization of land will result. The addition of geologic knowledge to the planning endeavor affords significant economic savings to the taxpayer, and implementation of prudent multiple land-use techniques enables higher realization of a region's potential.

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Method. A seven-square-mile area adjacent to the city of Lawrence, Kansas, was investigated in terms of elevation, bedrock geology, regolith thickness, drainage networks and basins, water table depths, soil types, vegetation, and natural resources. Separate maps of each of these factors were prepared and are being synthesized into suitability maps related to major urban land-use needs. Legal, social, and economic factors are discussed but not emphasized in the study. (PLH)

17. THE FEDERAL LANDS SINCE 1956: RECENT TRENDS IN USE AND MANAGEMENT

- (a) Marion Clawson. (b) Completed and published July, 1967, under the above title by the Johns Hopkins Press, Baltimore, Maryland 21218. 128 pages, paper. \$4.00 per copy. Library of Congress Catalog Card No. 67-16034. (c) Resources for the Future, Inc. (d) None.

Problem. This study supplements the earlier, more comprehensive volume, The Federal Lands: Their Use and Management, by Marion Clawson and Burnell Held, published in 1957. In addition to updating the data of the original volume, the new book analyzes the forward estimates of the earlier study, noting instances in which projections have not been borne out by actual developments and discussing the main reason for the divergencies.

Findings. Use of federal lands has increased markedly since 1956. Both recreational visits and oil production have more than doubled and the timber cut has risen by more than half. Receipts have increased, too, but somewhat less steeply than has use, largely because charges to recreationists are low or nonexistent. Expenditures, both for management and capital investment, have about tripled. As a result, the generally favorable financial balance from federal land management has evaporated. (RFF)

18. SELECTION OF REFUSE DISPOSAL SITES IN NORTHEASTERN ILLINOIS

- (a) George M. Hughes. (b) Completed. Findings reported under above title in Environmental Geology Notes, No. 17, September, 1967. Available from Illinois Geological Survey. No charge.

- (c) State of Illinois, Geological Survey. (d) None.

Problem. Analyze the relation of refuse disposal to ground-water contamination and determine ways of using such information to evaluate disposal sites in northeastern Illinois.

Fourteen million cubic yards of refuse were collected in northeastern Illinois in 1960. By 1980, the figure will have risen to 18 million cubic yards a year. More disposal sites must be found. Finding new sites, however, is a complicated matter. In several instances, refuse disposal has been proved to have caused contamination of ground water. Three sites investigated in northeastern Illinois showed dissolved solids leached from refuse had moved out of a disposal area, and in one of the sites the leachate had moved more than 100 yards. The aquifers of northeastern Illinois present in the glacial drift or shallow bedrock are particularly susceptible to contamination from near-surface refuse disposal.

Findings. Proper evaluation of a disposal site should consider: (1) nature of the contaminants present in the landfill; (2) conditions under which the contaminants are produced and mobilized; (3) movement and final disposition of the contaminants; and (4) effect of the refuse disposal operation on the hydrogeology of the site. The first consideration depends on the composition of the landfill; the others are primarily dependent on the hydrogeologic environment of the landfill site and the method of disposal.

The geologic environments commonly considered as safe for refuse disposal in the study area are those with materials of low permeability and those that are relatively dry. A third type of environment, one that is hydrologically protective, also should be considered for disposal purposes. (JS)

19. OPTIMUM POLICIES FOR SOLID WASTE COLLECTION

- (a) Cornelius Kruse, Jon Liebman, and Marcus Truitt. (b) In process. Completion and publication of report expected fall of 1968. Report to be submitted to and available from Public Health Service. (c) The Johns Hopkins University, Department of Environmental Engineering Science, under sponsorship

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of U. S. Department of Health, Education, and Welfare, Public Health Service. (d) None.

Problem. Build mathematical models for digital computer simulation of a solid waste collection system operating with compactor trucks in residential neighborhoods of large urban areas, in order to evaluate the efficiency (measured in dollars per ton cost) of proposed policy changes in the system by simulation rather than by field activity.

Method. (1) Compare costs of biweekly and triweekly collection frequencies; (2) identify the combinations of values of field and policy parameters which make a "transfer station" economically feasible. (MMT and JCL)

20. METROPOLITAN SOLID WASTE DISPOSAL BY RAIL TRANSPORTATION

(a) Not reported. (b) In process.
(c) American Public Works Association, under sponsorship of U. S. Department of Health, Education, and Welfare, Public Health Service, and the New York Central Railroad. (d) None.

Problem. Determine the feasibility of transporting solid wastes from cities by rail, to abandoned strip mines and other land in need of reclamation; determine the types of cars and other equipment most suitable for solid wastes, and whether unit trains can operate from cities on regular schedules to land reclamation sites or refuse reduction centers located at substantial distances from the cities. (JS)

21. GEOLOGIC FACTORS IN DAM AND RESERVOIR PLANNING

(a) W. Calhoun Smith. (b) Completed. Findings reported under above title in Environmental Geology Notes, No. 13, December, 1966. Available from Illinois Geological Survey. No charge. (c) State of Illinois, Geological Survey. (d) None.

Problem. To delineate the principal factors that must be considered in evaluating the geologic setting of dam and reservoir projects, and in Illinois, specifically.

As man strives to improve his environment, the development of a dam and reservoir is frequently planned to serve one or more purposes, such as flood control, water supply, and water-based recreation. Dams and reservoirs must be built on the surface of the earth and, in many instances, with natural earth materials. Therefore, one of the first steps in planning such a project is the evaluation of geologic conditions to determine the suitability of the site for the proposed project.

Findings. The planning of dam and reservoir sites must include careful consideration of the geologic environment. Knowledge of the principal elements of this environment--topography, hydrology, and geology--contributes to the success of a project. Various conditions in bedrock and unconsolidated deposits, such as discontinuities and the presence of shale or cavernous limestone, lead to problems in dam and reservoir construction and maintenance. Availability of construction materials, the effect of the project on the area's mineral resources, and the balance between site quality and budget, are economic aspects of dam and reservoir planning for which geologic considerations are important. (JS)

22. GEOLOGIC STUDIES AS AN AID TO GROUND-WATER MANAGEMENT

(a) Ronald A. Landon. (b) Completed. Findings reported under above title in Environmental Geology Notes, No. 14, May, 1967. Available from Illinois Geological Survey. No charge. (c) State of Illinois, Geological Survey. (d) None.

Problem. Evaluate an area where management of ground-water resources is contemplated, based on established criteria and using existing maps, water well logs, and engineering borings relating to the region.

Increased ground-water pumpage in the Chicago region, more than doubled since 1940, has resulted in a growing interest in the management of ground-water resources. Consequently, geologic studies of areas suitable for natural and artificial ground-water recharge have been conducted both on a regional scale, involving several counties, and on a local scale, covering several square miles.

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Findings. The existence of a suitable geologic environment is a prime prerequisite for artificial recharge of aquifers. The geologic environment may be assessed by examination of existing maps, well records, and engineering borings available for the area in question. From interpretation of these data, the presence, distribution, thickness, and character of the aquifer deposits and their overburden can be delineated. Making a preliminary evaluation of the geologic data already available is advantageous because: (1) it can eliminate from consideration areas where further investigation would be unprofitable, and (2) it can indicate where more detailed studies, such as drilling programs, are needed.

Evaluation for other land uses, such as mineral resource development, waste disposal, reservoir construction, other large-scale construction projects, and multipurpose land-use projects, can also be made from existing data and criteria. (JS)

23. HYDROGEOLOGY AT SHELBYVILLE, ILLINOIS-- A BASIS FOR WATER RESOURCE PLANNING

- (a) Keros Cartwright and Paul Kraatz.
- (b) Completed. Findings reported under above title in Environmental Geology Notes, No. 15, June, 1967. Available from Illinois Geological Survey. No charge. (c) State of Illinois, Geological Survey. (d) None.

Problem. A hydrogeologic study of the aquifer system at Shelbyville, Illinois to help the city make long-range plans for future water supplies.

The city obtains its public water supply from two sand and gravel aquifers that are contiguous at the site of the present municipal well field southwest of the city. The study outlines the present well field and areas for future water resource development.

Method. Planning for the city's future water supply required delineation of the properties and dimensions of the aquifer system (water-yielding strata) from which the present wells draw water, estimates of potential yield of the aquifer, projection of water needs, and consideration of the economics of alternative sources of water. To assist the city in planning its future water facilities, a quantitative appraisal

of the hydrogeology of Shelbyville's groundwater supply was necessary.

Findings. The potential yield of the well field was found to be more than three times the present pumpage. Several methods of water management would be physically feasible, and the physical conditions will allow the city considerable flexibility in planning future water facilities. (JS)

24. URBAN GEOLOGY OF THE AUSTIN, TEXAS AREA

- (a) Peter U. Rodda and Keith P. Young.
- (b) Completion expected during 1968. Resulting report and accompanying maps to be published by Bureau of Economic Geology, University of Texas at Austin. Price not yet determined. (c) University of Texas at Austin, Bureau of Economic Geology. (d) None.

Problem. Study the engineering and environmental geology of the Austin, Texas area to develop data useful for urban planning. Basically, a stratigraphic and structural study, the project includes descriptions of bedrock and surficial deposits, engineering properties of the geologic units and resources such as water, construction materials, and parks and other recreational areas.

Previous Research. Unpublished engineering data developed by private testing laboratories and state and municipal agencies have been contributed to the project. Data include plasticity index, penetrometer tests, unconfined compression, shear strength, and shrink-swell potential.

Method. The study area, Austin East, Austin West, Oak Hill, and Montopolis 7.5-minute quadrangles, as well as adjoining areas of probable urban expansion, is being geologically mapped at a scale of 2,000 feet to 1 inch. Engineering data are being compiled and evaluated in relation to problems of the Austin area involving foundations (expansive clays, bearing strengths, excavation, and permeability); roads (slope stability of rock units, excavation, character of sub-base), sewage disposal (septic tanks, sewerline routes, tunnels and deep cuts, effluent ponds), and corrosion of pipelines and other buried facilities. (RG)

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25. ENVIRONMENTAL GEOLOGY OF MCHENRY COUNTY, ILLINOIS

(a) James E. Hackett. (b) Completion scheduled for October, 1967. Publication by Illinois Geological Survey expected in 1968. (c) State of Illinois, Geological Survey, at request of McHenry County Regional Planning Commission, in cooperation with U. S. Soil Conservation Service and the University of Illinois Agricultural Experiment Station. (d) None.

Problem. Studies in the geology and mineral economics of McHenry County to provide information for land-use planning purposes in that county.

Method. Studies are based mainly on existing geologic control and mapping supplemented by some specific field investigations, involving: (1) physiographic analysis of the major physiographic units within the county; (2) relation between surficial geologic units and soil series units; (3) subsurface stratigraphy of unconsolidated deposits; (4) occurrence and character of glacial drift and bedrock aquifers; (5) geologic feasibility for water resource management programs; (6) occurrence and character of construction materials including sand and gravel, rock products, and borrow materials; (7) characteristics and potential use of clay deposits; (8) economic value of mineral resources; (9) engineering characteristics of geologic units; (10) geologic evaluation of surface reservoir conditions and of proposed reservoir sites. The results of these studies will provide the basis for preparing interpretive use maps for application to specific elements of land-use planning, and will be presented along with a descriptive nontechnical report. (REB)

26. ENVIRONMENTAL GEOLOGY OF THE SPRINGFIELD-DECATUR, ILLINOIS, AREA

(a) Kemal Piskin and Robert E. Bergstrom. (b) In process. Completion and publication of report by Geological Survey expected in 1968. No charge. (c) State of Illinois, Geological Survey. (d) See 12:2-39; 13:2-168.

Problem. To collect, integrate, and present information about the physical envi-

ronment and mineral resources of the Springfield-Decatur, Illinois, area, for the benefit of regional, mainly urban planning.

Method. Geologic information from published reports and maps, unpublished maps, and subsurface records is being compiled and plotted on maps relative to sand and gravel deposits, water resources, thickness of glacial drift, nature of bedrock, coal and mined-out areas, oil fields, and properties of shallow earth materials. This information will be reviewed in association with various area agencies having planning responsibilities to devise the most useful means of presentation. (REB)

27. ENVIRONMENTAL GEOLOGY OF BOONE AND DEKALB COUNTIES, ILLINOIS

(a) John P. Kempton. (b) Completed. Report to be published and available in 1968. No charge. (c) State of Illinois, Geological Survey. (d) See 12:2-39; 13:2-68.

Problem. Investigate and present information concerning geology and natural resources in Boone and DeKalb Counties relative to regional planning. The study considers ground-water geology, mineral resources, and composition of earth materials, with emphasis on aspects that deal with resource development, waste disposal, open space use, flooding, storm drainage, surface reservoirs, and general construction conditions. (REB)

Water

28. THE COLUMBIA RIVER TREATY--THE ECONOMICS OF AN INTERNATIONAL RIVER BASIN DEVELOPMENT

(a) John V. Krutilla. (b) Completed and published June, 1967, under the above title by The Johns Hopkins Press, Baltimore, Maryland 21218. 236 pp. \$7.50 per copy. Library of Congress Catalog Card No. 67-16037. (c) Resources for the Future, Inc. (d) None.

Problem. Evaluate the economic consequences of the Columbia River Treaty. The treaty is an outstanding example of international cooperation in river basin development. Nevertheless, agreement took twenty years to bring about. The engineering and economic

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studies made in preparation for international agreement on so complex an undertaking were concerned with the selection of sites, the timing of project construction, and division of costs and benefits between the upstream and downstream countries. Subsequent negotiations were protracted in part because of changing technological, economic, and political conditions in both countries.

Six years before the treaty took effect, the investigator began his study of the economics of the Columbia project. He saw in the Columbia an opportunity to apply the principles of cost-benefit analysis to an international program in which an equitable division of costs and gains was an aim along with realizing economies available by reason of coordinated development.

Previous Research. John V. Krutilla and Otto Eckstein, Multiple Purpose River Development, The Johns Hopkins Press, 1958; John V. Krutilla, Sequence and Timing in River Basin Development, a preliminary analysis of the Columbia River Basin Plan, Resources for the Future, Inc., 1960. (JS)

29. RESOURCE PLANNING FOR THE CONNECTICUT RIVER VALLEY

(a) John M. Wilkinson. (b) Completed. Published under the above title in two parts in New England Business Review, Federal Reserve Bank of Boston. Part I, "Water Problems," May, 1967; Part II, "Planning Problems," July, 1967. A more detailed research report also available from research agency. (c) Federal Reserve Bank of Boston, Research Department. (d) None.

Problem. Study the emerging water problems and future options that confront the Connecticut River Valley.

Findings. Part I examines separately five major water problems in the valley's future. Floods remain its most serious threat and require the most difficult solutions, while water supply for urban, rural, and industrial uses should be the least of its worries. The river system will always be polluted, by purist standards, but in terms of nearly all water uses the pollution problem could soon be eliminated. Hydropower could perform a more useful role in the

valley than ever before in history, and public recreational use of the river system could be expanded considerably without seriously diminishing the quality of the recreation experience. Part II describes new approaches for achieving cooperation among federal, state, and local groups to solve the planning and management problems. (JS)

30. WATER SUPPLY AND DEMAND

(a) David J. Allee, Leonard B. Dworsky and L. M. Falkson. (b) In process. (c) Cornell University, College of Agriculture, Water Resources Center and Department of Economics, under sponsorship of U. S. Department of the Interior, Office of Water Resources Research. (d) None.

Problem. Provide new information concerning the supply of water available to New York and adjoining states in the Northeast region, including ultimately the influence of Canada, and the demands that will be made on such supplies for domestic, municipal, industrial, agricultural, and recreational uses; for the propagation of fish, aquatic life, and wildlife; and for other purposes.

Method. Conduct hydro-meteorological and engineering analyses, socioeconomic investigations, and data processing and programming studies to: (1) estimate present water use, potential supply, and capacity of existing development on a comparable and uniform basis; (2) estimate the supply functions for water (i.e., what each successive increase in developed capacity might cost); (3) construct projections of water use by each water function; and (4) match the demand data to the water supply data. Subsequent projections would consider the cost of meeting demands. (DJA)

31. CRITERIA FOR WATER RESOURCES INVESTMENT

(a) Charles L. Leven and Richard Muth. (b) A three-year project near completion. Recent Working Papers are Raymond J. Struyk, Summary of Present Practices in Evaluation of Water Resource Projects, Working Paper CWR 13, August, 1967; and Joseph Mulholland, The Objectives of Government Water

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Resource Policy, Working Paper CWR 14, August, 1967. Available from Institute for Urban and Regional Studies, Washington University. (c) Washington University (St. Louis), Institute for Urban and Regional Studies, under sponsorship of U. S. Corps of Army Engineers. (d) 13:1-201; 14:1-172.

Problem. The research is concerned, generally, with the problem of selecting among alternative water resource projects and, more particularly, with effects of water resource projects on regional economic development.

Working Paper 13 summarizes the most important elements of present practices in economic evaluation of water resources projects on the basis of policy statements, technical manuals, and selected project reports.

Working Paper 14 attempts to delineate those objectives which seem to be most important to the Congress for national water resource policy. Sources examined were recent official and quasi-official pronouncements on the subject, and the actual project selection record of Congress and its nationalization of such selection. The paper concludes that examination of the decision-making process of Congress at close range gives little insight into that body's predominant objectives. Political survival along with a host of other complicating factors proves a significant obstacle to any attempt at definitive analysis. Policy statements are ambiguous and lack rigorous rationale. This is reflected in the actual project selection record. (CLL)

32. IMPACT OF THE NORTHEASTERN DROUGHT ON PLANNING AND PROVISION OF MUNICIPAL WATER SUPPLIES

(a) Robert W. Kates. (b) In process. Findings to be published as monograph or series of articles. (c) Clark University, Department of Geography. (d) None.

Problem. To provide water system managers and state, regional, and federal planners with new information about the impact of drought, the efficacy of alternative short-term measures of relief, and longer-term pay-offs from improved planning procedures. The Northeastern United States has experienced a long and severe drought, costly to both the agricultural and urban sectors of

the region's economy. Such diverse remedies as higher prices for water and large-scale sea water desalting programs have been suggested.

Method. As the sample for his study, the investigator has selected 50 communities in Massachusetts which represent a broad spectrum of experience with drought conditions, adequacy of underlying physical supply system, measures instituted to cope with drought, and sophistication of planning procedures used. The study will: (1) Identify and contrast the characteristics of planning procedures used in communities where drought impact was particularly severe and where little or no restriction of service was experienced. This information will be gathered by interviews with system managers and through acquisition of data on dollar costs involved, either in obtaining emergency supplies or in restricting water use. (2) Determine whether the range of alternatives considered in planning additional supplies was widened or narrowed by the pressures of drought crisis. Not only alternative physical systems, but institutional cooperation and collaboration among separate political units will be considered, as well. (3) The effectiveness of various steps taken to reduce water use, including increased prices to water users, will be measured. The financial condition of the utilities will be investigated and any financial difficulties induced by the drought noted. (JS)

33. IMPACT OF COMMUNITY WATER SYSTEMS IN SMALL TOWNS

(a) Donald D. Osburn and Walter J. Wills. (b) Initiated September, 1967. (c) Southern Illinois University, Agricultural Industries Department, with support from the office of Water Resources Research, in cooperation with the Farmers Home Administration. (d) None.

Problem. Over fifty new community water systems have been completed in Illinois. Others are in process. This study will show the impact of such investment upon economic development of the town and upon the surrounding community.

Method. (1) Collect data from these communities to show change in community tax base as reflected by new buildings and increased employment compared with the year

prior to the water system; (2) collect data to show change in water use per consuming unit in the town; (3) survey fifty users to determine changes they have made or expect to make; (4) survey sixty farmers who buy water to determine cost of buying and hauling water to the farm; (5) from these data, estimate a "normal" growth pattern for water use in such communities and estimate what these facilities contribute to economic development. (WJW)

34. HYDROLOGIC MODELS FOR PREDICTING THE EFFECTS OF URBANIZATION

(a) Irwin Remson, A. A. Fungaroli, and G. M. Hornberger. (b) In process. Findings to date published by the investigators in "Numerical Analysis of Soil-Moisture Systems," Journal of the Irrigation and Drainage Division, A.S.C.E., scheduled for September, 1967; and "A Computer Program for the Numerical Analysis of Soil-Moisture Systems," Drexel Institute of Technology College of Engineering and Science, Series I, No. 1, 1966. (c) Drexel Institute of Technology, Department of Civil Engineering and Mechanics, under sponsorship of National Science Foundation, Engineering Division. (d) 13:2-47.

Problem. To prepare numerical hydrologic models for testing and predicting the effects of urbanization. The models are to simulate the hydraulic functioning of the component systems of the hydrologic cycle.

Findings. A method has been prepared for analyzing soil-moisture systems using a numerical technique and a digital computer. The method has been employed to study the effects of evaporation and soil-moisture hysteresis on a draining mass of infiltrated rainfall; extended to analyze ground-water and soil-moisture as a single system; used to study the effects of soil moisture, delayed drainage, and nonlinearity on ground-water aquifers. The method can be used only for small idealized systems because of convergence and stability problems, but is being revised to apply to larger realistic systems. (IR)

35. ECONOMIC ANALYSIS OF ALTERNATIVE FLOOD CONTROL MEASURES

(a) L. Douglas James. (b) In process. (c) University of Kentucky, Water Resources Institute, under sponsorship of U. S. Department of the Interior, Office of Water Resources Research. (d) None.

Problem. Analyze the economic advantages of various combinations of channel improvement, reservoir storage, flood proofing, land-use adjustment, and bearing flood damages. A method previously developed for combining these various policies according to economic efficiency criteria is being programmed in Fortran for the digital computers to determine the optimum flood control policy within each portion of the watershed during successive time periods.

Method. (1) Write a Fortran program to combine all measures except reservoir storage; (2) using data from one watershed, test the sensitivity of the optimum policy to unit costs, discount rate, population projections, the value of urban open space, and other input variables; (3) using data from several watersheds, test the sensitivity of the optimum policy to geographical setting; (4) expand the program to include reservoir storage; (5) conduct sensitivity testing of the final program. (LDJ)

36. ANALYSIS OF FLOOD PLAIN INFORMATION STUDIES

(a) John R. Sheaffer. (b) Completion scheduled for fall of 1967. Report to be issued. (c) University of Chicago, Center for Urban Studies, under sponsorship of U. S. Army Corps of Engineers. (d) None.

Problem. Assemble and evaluate factors related to a flood plain management program to give guidance to expanded federal flood plain management efforts.

Method. Analyze the decision-making process and the values and attitudes which affect it in flood plain management. Evaluate theoretical formulations from empirical data gathered from four field investigations. (CAS)

37. INTRODUCTION TO FLOOD PROOFING

(a) John R. Sheaffer. (b) Completed. Published under the above title as a manual. Copies available from the Center for Urban Studies, University of Chicago, or from the U. S. Army Corps of Engineers. (c) University of Chicago, Center for Urban Studies, under sponsorship of U. S. Army Corps of Engineers and the Tennessee Valley Authority. (d) None.

Problem. The manual is designed to acquaint public officials, building owners, and professionals with the essential principles of flood proofing and to outline and illustrate a number of simple but effective measures for reducing flood damage. (CAS)

38. WATER QUALITY MANAGEMENT IN THE OHIO VALLEY UNDER AN INTERSTATE COMPACT

(a) Edward J. Cleary. (b) Completed and published July, 1967 as The ORSANCO Story, by The Johns Hopkins Press, Baltimore, Maryland 21218. 352 pp. \$8.50 per copy, cloth; \$2.95, paper. Library of Congress Catalog Card No. 67-16036. (c) Resources for the Future, Inc. (d) None.

Problem. Describe the organization and operation of the Ohio River Valley Water Sanitation Commission (ORSANCO), evaluate its performance thus far, and discuss future prospects in the light of rising public concern over pollution and the impact of new federal water policies on interstate programs.

In the evolution of the federal system in the United States, one of the most difficult tasks has been that of dealing with problems that affect more than one state but are not nationwide in extent. The interstate compact has long offered a possible basis for establishing an interstate agency to deal with problems of a regional nature, but the device has seldom been utilized successfully to deal with complex problems. ORSANCO is an outstanding exception. It was inaugurated in 1948, when eight states, Illinois, Indiana, Kentucky, New York, Ohio, Pennsylvania, Virginia, and West Virginia, joined in an interstate compact to coordinate their resources in combating pollution in the

981-mile Ohio River and its nineteen major tributaries. The study not only details what ORSANCO has accomplished, but suggests that an interstate compact agency can serve an even broader purpose. (JS)

39. URBANIZATION AND ITS EFFECT ON WATER RESOURCES

(a) Matityahu Marcus, Bruce E. Newling, Kurt Nathan, and E. Genetelli. (b) In process. Completion scheduled for July, 1969. Population projection model and its empirical verification described in Bruce E. Newling, "Urban Populations: The Mathematics of Structure and Process," paper presented at Annual Meetings of the Association of American Geographers, St. Louis, Missouri, April 12, 1967. (c) Rutgers, the State University, Departments of Economics, Geography, and of Agricultural Engineering, under sponsorship of U. S. Department of the Interior, Office of Water Resources Research. (d) None.

Problem. Identify, describe, and project major processes of urbanization in relation to land use and distributive (market) aspects of water resource development. Urbanization is defined in terms of industry and households, the two major urban water user groups.

Method. (1) Analyze the aggregate area (New Jersey) economy as a set of industries in which urbanization characteristics can be examined and for which projections can be attempted, using existing industry, employment, and population data. Anticipated changes in the economic dimensions of a newly urbanized area will be described. (2) Analyze the spatial structure of urban population and areal growth on the basis of a simple urban growth model which uses a density-distance relationship. The technique will be applied to selected test areas using parameters developed from available census and residential land use data. Projections of increased population and densities are being made by five-year intervals from 1970-2000. (3) Develop indices of basic pollution load on major watersheds during past years, which can be statistically related to population and industrial growth and used to obtain approximations of pollution load for the future. (BEN)

PHYSICAL ENVIRONMENT

40. LAKE ONTARIO PROGRAM FOR WATER POLLUTION CONTROL

- (a) Not reported. An interdisciplinary professional staff located in Rochester, New York, is conducting the research. (b) In process. The study is part of a larger one conducted in the Great Lakes and Illinois River Basins. (c) Federal Water Pollution Control Administration, in cooperation with Canadian agencies, New York State Health Department, and other state and federal agencies, local municipalities and industries, and universities of the region. (d) None.

Problem. To preserve the usefulness of Lake Ontario and other waters in an 18,000-square-mile area of upper New York State.

Method. Field investigations can be grouped into studies of Lake Ontario, and studies of its tributaries. Lake investigations focus on determining the chemical and biological characteristics of the lake at various depths at a selected number of stations and relating this quality to the lake's environment, using a 65-foot laboratory vessel. To determine the origin and fate of pollutants to the lake, mass water movements are evaluated by means of automatic recorders that measure current speed, direction, and temperature.

Studies in the watershed are centered in the areas where the most critical pollution problems exist. These studies include: a sampling program to determine amount and character of industrial wastes being discharged; determination of the impact of waste inputs on quality in the Genesee, Seneca, and Oswego Rivers and their capacities for assimilating waste inputs; and development of modern computer techniques to determine the streamflows necessary to maintain a desired water quality under a wide variety of waste loadings. Mass water movements of Cayuga Lake are being studied with a number of automatic current and temperature recorders to provide information on the extent to which the Finger Lakes, and Cayuga in particular, renew themselves. Preliminary analysis indicates that these lakes remain partially stagnant and could be polluted quickly should they be subjected to the quantities of waste that Onondaga Lake now receives. Oneida Lake is undergoing intense biological study to determine the causes of the abnormally large algae growths encountered there. Special attention is also being

paid to the unusual buildup of settleable solids on the bed of Onondaga Lake. To aid in determining to what extent these solids, mainly of domestic waste origin, are polluting the lake, Syracuse's combined sanitary-storm sewer overflows will be studied. (JS)

41. ECONOMIC EVALUATION OF WATER POLLUTION CONTROL: YAQUINA BAY, OREGON

- (a) E. N. Castel and H. H. Stoevener. (b) In process. A comprehensive report being prepared for publication. Earlier findings published previously include: Emery N. Castle, Economic and Administrative Problems of Water Pollution; H. H. Stoevener and A. A. Sokoloski, Estimation of the Magnitude and Distribution of Benefits from Recreational Resource Management in the Economy of a Small Area (preliminary findings estimating some recreational values and local area income effects associated with alternative resource management schemes, and implications for the analysis of resource management institutions); Joe B. Stevens, "Recreation Benefits from Water Pollution Control," Water Resources Research, Volume 2, Number 2, Second Quarter, 1966, pp. 167-182; K.C. Gibbs and H. H. Stoevener, Consumer Incomes and Expenditures in the Newport-Toledo Area (a study concerned with estimating the relationship between household income and consumption in that area of Yaquina Bay, a prerequisite for analyzing the effects of various economic policies). (c) Oregon State University, Department of Agricultural Economics, under sponsorship of Federal Water Pollution Control Administration. (d) 13:2-125.

Problem. A comprehensive study of the economics of water pollution in an estuary, using Yaquina Bay, Oregon, as a case study. (HHS)

42. FACTORS INFLUENCING THE PRODUCTION OF PLANKTONIC AND BENTHIC PLANTS

- (a) M. A. Churchill and E. B. Welch. (b) In process. (c) Tennessee Valley Authority. (d) None.

PHYSICAL ENVIRONMENT

Problem. Study the role of factors that control rates of growth and total standing crop of both planktonic and benthic plants in streams and reservoirs.

Method. Effects of the following factors in growth rates under field and, in some cases, laboratory conditions, will be evaluated: (1) various nutrient levels; (2) interaction of communities due to excretion of extracellular metabolites or competition for nutrients; (3) source of nutrients in streams and reservoirs whether from land areas having various forms of vegetal cover or from waste discharges; (4) substrate types; (5) light penetration; (6) reservoir operation and hydraulic flow characteristics; and (7) other physical and chemical characteristics of the flowing or impounded waters. A prediction equation that will include and define the relative importance of the significant factors will be developed, based on a multivariate analysis of the data. (WRN)

43. EFFECTS OF WASTE HEAT

(a) M. A. Churchill, R. B. Samworth, and E. B. Welch. (b) In process. (c) Tennessee Valley Authority. (d) None.

Problem. Provide means for predicting temporal and spatial distribution of excess heat in streams receiving condenser cooling water from steam-electric generating plants.

Method. Biological studies will provide guides for establishing allowable temperatures. There is particular interest in situations where the warm water, due to its lower density, stratifies in the surface layers of the receiving stream or reservoir and there loses much of its excess heat to the atmosphere before mixing takes place. Data obtained below existing power plants will be used in developing and verifying prediction methods. Preoperational and operational studies in the vicinity of new plants are providing data to evaluate biological effects of heat. Laboratory studies will provide information on the tolerance of specific organisms to elevated temperatures. (WRN)

44. EFFECTS OF IMPOUNDMENTS ON WATER QUALITY

(a) M. A. Churchill, R. B. Samworth, and E. B. Welch. (b) In process. (c) Tennessee Valley Authority. (d) None.

Problem. Provide a means for predicting the quality of the water to be released through low-level outlets of proposed impoundments.

Method. A regression equation has been fitted to data collected routinely for a number of years for other purposes. This equation allows the prediction of dissolved oxygen concentrations in the releases throughout the year. As more extensive data on water quality and on movement of water into, through, and out of reservoirs are obtained, a rational prediction equation will be developed that will apply to a wider range of conditions than does the regression equation. Techniques for predicting concentrations of iron, manganese, plankton, coliform organisms, and other properties are also sought. Means of raising dissolved oxygen concentrations by modifying the design or operation of discharge control structures are under evaluation. (WRN)

45. EFFECTS OF DEVELOPMENT ON WATER QUALITY

(a) M. A. Churchill and R. A. Buckingham. (b) In process. (c) Tennessee Valley Authority. (d) None.

Problem. Determine the physical, chemical, and biological effects of various land uses on the quality of the through-flowing streams.

Method. Some types of coliforms normally live in the soil and on vegetation. Though not really indicative of pollution, they are occasionally interpreted as such. Research will be conducted on controlled land areas to determine the contribution of fecal and nonfecal coliforms from various types of soils and types of land cover. To help assess the extent of eutrophication, an evaluation will be made of nutrient contributions to streams and reservoirs from land areas having various forms of vegetal cover. Research will be conducted on controlled agricultural areas to determine what percentages of various insecticides used are washed off the land by rainfall to enter the receiving streams. (WRN)

46. EFFECTS OF POLLUTION ON WATER USES

(a) M. A. Churchill and W. R. Nicholas.
 (b) In process. Findings to date reported in M. A. Churchill and W. R. Nicholas, "Effects of Impoundments on Water Quality," Proceedings of the National Symposium on Quality Standards for Natural Waters, The University of Michigan, Ann Arbor, Michigan, July, 1966; and M. A. Churchill, "Effects of Streamflow Regulation on Water Quality--The TVA Experience," Proceedings of International Conference on Water for Peace, Washington, D. C., May, 1967. (c) Tennessee Valley Authority. (d) 13:2-157.

Problem. Investigate and compare the relative survival and/or multiplication rates of fecal and nonfecal coliforms in natural waters and the survival and multiplication of fecal coliforms in waste-disposal lagoons, streams, and reservoirs. Compare the oxygen-absorption rates of clean streams with those polluted by various kinds of industrial wastes. Estimates of assimilative capacity of streams at and below promising industrial sites can then be made using the stream reaeration prediction equation recently developed. (JS)

Natural Resources

47. U. S. TIMBER RESOURCES IN A WORLD ECONOMY

(a) John A. Zivnuska. (b) Completed and published under the above title by The Johns Hopkins Press, Baltimore, Maryland 21218. 140 pp. \$3.50 per copy, paper. Library of Congress Card No. 67-21585. (c) University of California (Berkeley), School of Forestry, under sponsorship of Resources for the Future, Inc. (d) None.

Problem. Survey on a worldwide basis the patterns and expectations in wood availability and consumption that may impinge on production policies and public policies affecting timber in the United States; recommend a research program that would bring up to date the information necessary in formulating U. S. production decisions and policies.

Findings. In terms of total wood volume, the U. S. is currently growing substantially more timber than it is using annually. If this surplus growth, amounting to some 60 percent of the 1962 cutting level, is to serve as a resource for the nation in a functional sense, it must be through the development of markets in which the kinds of material will serve society. Such development could be in either domestic or world markets.

The forest product mix has been changing in recent years, so that it is now more economical than in the past to transport some kinds of forest products over long distances. Trading patterns have also been changing. Countries that were once net exporters of forest products are now net importers. The U. S., despite its surplus, imported, chiefly from Canada, 13 percent of its total consumption of forest products, on a net basis. This reflects several factors--imbalance by regions, species, groups, and size classes among them. Also, standards of utilization and greatly improved knowledge from intensified forest surveys have changed the ratio of volume of timber cut annually to the volume of annual growth. There is a good case for viewing the U. S. and Canada as a single forest products supply region on the world scene, a North American timber base to supply increasing international demand. (JS)

48. ECONOMIC ASPECTS OF OIL CONSERVATION REGULATION

(a) Wallace F. Lovejoy and Paul T. Homan. (b) Completed and published under the above title, October, 1967, by Johns Hopkins Press, Baltimore, Maryland 21218. 312 pp. \$8.50 per copy. Library of Congress Catalog Card No. 67-20283. (c) Resources for the Future, Inc. (d) None.

Problem. Examine and analyze the history of state oil regulation programs, the situations that led to them, and the way they have been carried out in practice; analyze and evaluate the results that have been obtained, and discuss possibilities for improvement contained in the remedial actions that have been proposed. The production of crude oil in the U. S. is subject to detailed regulation by agencies of most of the important oil-producing states. These regulatory systems were established in the 1930's in

an effort to prevent the large wastes in production and the disastrously unstable market conditions that plagued the industry. Today, however, state regulation is often criticized for encouraging large-scale waste through inefficient development and production of the nation's oil resources. (JS)

49. DEMAND FOR COMMODITIES PRODUCED ON PUBLIC LANDS

- (a) Not reported. (b) In process.
(c) Robert R. Nathan Associates, Inc., under sponsorship of Public Land Law Review Commission. (d) None.

Problem. Study future national and regional demands for commodities producible on public lands.

Method. Make national projections for all commodities and regional consumption projections for specified types of commodities including timber, forage for domestic livestock, energy and energy fuels, selected nonfuel minerals, water, selected agricultural crops, wild game and sportfish, outdoor recreation, and land occupancy uses. Projections of population and economic indexes, both nationally and for defined regions, will also be provided. (JS)

50. MINERAL RESOURCES OF PROPOSED RESERVOIR SITES IN SOUTHEAST AND NORTHEAST TEXAS

- (a) W. L. Fisher. (b) In process. Completion scheduled for early 1968. Publication of report not yet determined. (c) University of Texas at Austin, Bureau of Economic Geology, under sponsorship of State of Texas, Water Development Board. (d) None.

Problem. Investigate mineral resources of proposed water-reservoir sites to determine their distribution and grade.

Method. Four of the proposed sites are in south Texas, ten in northeast Texas. Geologists are mapping principal rock units in the areas under investigation at a scale of 1:63,000. Potentially commercial mineral deposits will also be delineated on the maps. Testing is being conducted to determine the physical and chemical properties

of outcrop and shallow borehole samples. Evaluations of oil and gas fields at the reservoir sites will include estimates of reserves, limits of the productive areas, and problems associated with recovery subsequent to flooding. (RG)

51. URBAN EXPANSION--AN OPPORTUNITY AND A CHALLENGE TO INDUSTRIAL MINERAL PRODUCERS

- (a) H. E. Risser and R. L. Major.
(b) Completed. Findings reported under above title in Environmental Geology Notes, No. 16, September, 1967. Available from Illinois Geological Survey. No charge. (c) State of Illinois, Geological Survey. (d) None.

Problem. Examine the opportunities and the problems confronting industrial mineral producers in the face of urban expansion.

Findings. Projections indicate that a cumulative production of 13.5 billion tons of sand and gravel and 11.4 billion tons of stone will be required to meet market demands in the U. S. within the next decade. The increased demand results from a rapidly growing population and an even more rapid growth in per capita consumption of mineral products. Urbanization leads to a greater concentration of population, which provides larger, more concentrated market outlets. These, in turn, bring the opportunity for larger, more efficient operating units. At the same time, urbanization results in numerous problems. Some of the existing pits and quarries have been rendered uneconomic because of various operational restrictions imposed by local governments. Many of the potential mineral reserves in and near the urban centers are being built over by "urban sprawl," while others are being made unavailable by restrictive zoning ordinances. The Chicago metropolitan area, examined as a case history in this study, provides an example of the relationship between sand, gravel, and stone deposits and urbanization. Advance planning for multiple or sequential use of the land can help industrial minerals producers retain their present operating rights and obtain permission to open new properties even though zoning ordinances are becoming more stringent. (HER)

52. THE MINERAL INDUSTRY AND RESOURCES
OF THE APPALACHIA COUNTIES OF NEW
YORK STATE

(a) Rose Jochowitz and James F. Davis. (b) Completion scheduled for June, 1968. (c) New York State Museum and Science Service, Geological Survey, and The State University of New York at Albany, New York State Council for Economic Education. (d) None.

Problem. A dual discipline analysis of the mineral resources and mineral industry of the Appalachia region to identify the causes of growth and recommend stimuli to achieve expansion in the mineral industry of this area.

Method. An economic investigation of historical behavior of production of each mineral commodity over the last 20 to 30 years is being correlated with indications of economic activity in the counties considered during the same period.

Findings. The mineral commodities of the Appalachia region are exclusively construction raw materials. The mineral economy cannot, therefore, initiate growth in this region, but can only respond to it and amplify it. Recommendations will be made for the best use of the resources available. A resource map has been prepared. (JFD)

53. MINERAL RESOURCES OF THE HUDSON
VALLEY

(a) J. G. Broughton, J. F. Davis, and J. H. Thompson. (b) Completed and published by the Hudson River Valley Commission. (c) New York State Museum and Science Service, Geological Survey, for the Hudson River Valley Commission. (d) None.

Problem. Study the current mineral industries and resources in the Hudson Valley and assess their future importance, to aid the Hudson River Valley Commission in devising future policies concerning the extractive mineral industries adjacent to the Valley as it formulates recommendations concerning future land-use and development patterns within the Hudson Valley.

Method. (1) Assemble directory of current mineral producers; (2) map potentially

usable mineral resources; (3) conduct historical analysis of mineral production; (4) map all active and inactive extractive industry openings. The needs of each mineral industry were identified in terms of raw material specifications, proximity to raw material, transportation network, and market conditions. A forecast of the future of the mineral industry was made. In addition, geologic factors which may influence the future development of the Hudson Valley were considered.

Findings. The most important present mineral commodities (crushed stone, cement, brick, lightweight aggregate, sand, and gravel) are those employed in the construction industries. Stresses on retaining scenic aspects of the Hudson Valley may provide impetus for underground operations to obtain raw materials for the cement and crushed stone industries. Sand and gravel operations at the surface should be managed in a way which will leave the land in a configuration suitable for planned subsequent uses. Research on sanitary waste disposal techniques is necessary to create usable areas by scientifically specified landfill techniques which will not have deleterious side effects. Underground storage of natural possibilities in permeable subsurface strata needs further investigation. Prospects of underground warehousing in abandoned mining operations may be worthwhile. Underground pipeline solids transportation may provide for moving fuels or finely grained mineral materials more conveniently to urban consumption sites. Several areas in the Valley need soil mechanics studies to insure that large structures built upon them in the future would be stable. (JFD)

54. SURFICIAL GEOLOGY AND RESOURCES OF
THE LAKE CHAMPLAIN BASIN

(a) Gordon Connally. (b) Final report scheduled for December, 1967. (c) New York State Museum and Science Service, Geological Survey, and Lafayette College (Evanston, Pennsylvania), with support from the New York State Executive Department, Office of Planning Coordination. (d) None.

Problem. Study the surficial geology and resources and their potential uses of the Lake Champlain Basin (Clinton, Essex, Warren, and Washington Counties), with emphasis upon areas in which recreational development or urbanization are expected in the future.

Method. Field mapping of surficial materials of the four counties using aerial photographs, previous mapping, if available, and soils maps to establish the distribution of the principal surficial material types. Mapping units include lacustrine clays, lacustrine sands, ice contact deposits, outwash deposits, alluvial deposits, several till types and peat. Report will discuss size ranges of sand and gravel, inferred depths and possible depths of materials, and potential uses. (JFD)

55. CARBONATE ROCK RESOURCES OF WARREN AND WASHINGTON COUNTIES

- (a) John H. Johnson and C. W. Welby.
- (b) Completed and published in 1966 in limited quantity by New York State Executive Department, Office of Planning Coordination.
- (c) New York State Museum and Science Service, Geological Survey, under sponsorship of New York State Executive Department, Office of Planning Coordination.
- (d) None.

Problem. A stratigraphic study of the rock units in Washington and Warren Counties, part of a general inventory of total resources being conducted in the Lake Champlain area to aid New York State in developing a long-range plan for future development of that region.

Previous Research. E. Brainer and H. M. Seely, "The Calciferous Formation in the Champlain Valley," Geol. Soc. America Bull., Vol. 1, 1890a, pp. 501-516; _____, "The Calciferous Formation in the Champlain Valley," American Mus. Nat. History Bull., Vol. 3, 1890b, pp. 1-24; and R. H. Flower, The Nautiloid Order Ellesmeroceratida (Cephalopoda), Memoir 12, New Mexico State Bureau of Mines and Mineral Resources, 1964, pp. 153-161.

Method. Field mapping, fossil identification, and measuring of sections. Information on distribution of carbonate rock types was integrated with previous mapping in the Champlain area. Maps of carbonate rocks in 7 7 1/2 minute and 2 15 minute quadrangles were prepared. The stratigraphy of the Beekmantown was tentatively revised. Twelve cross sections were prepared. Prospective quarry sites were recommended. (JFD)

56. MINERAL RESOURCES OF LONG ISLAND

- (a) James R. Dunn and Associates.
- (b) Completed September, 1967.
- (c) New York State Museum and Science Service, Geological Survey, under sponsorship of New York State Executive Department, Office of Planning Coordination.
- (d) None.

Problem. Analyze present mineral resources of Long Island; project future demand for them and submit recommendations by which this demand can be satisfied.

Method. Sand and gravel are the principal mineral resources on Long Island. Their historical rates of consumption in the Greater New York Metropolitan area were evaluated to estimate the volume of these materials required by the year 2,000. Present production sites were inventoried and history of production volumes analyzed. Present reserves owned by producers were estimated. The influence of sand and gravel excavations on quantity and quality of ground water were considered.

Findings. (1) More than half of the sand and gravel produced on Long Island is used in New York City as concrete aggregate; (2) by 2,000, New York City and Long Island will consume about three times the amount of sand and gravel currently held by producers as reserves; (3) no competitive alternative to sand and gravel for concrete aggregate is currently known; (4) the quantity and quality of sand and gravel beneath Long Island Sound and New York City's Lower Bay are not known in detail; (5) present reserves of crushed stone will not account for the deficit in sand and gravel required by the year 2,000; (6) possible courses of action to meet future demand involve underground mining of crushed stone, creation of lakes, harbors, and waste disposal areas on Long Island by sand and gravel removal. Principal future production of sand and gravel should take place along the North Shore of Long Island where barge transportation can be employed, and in the high hill areas adjacent to the Long Island Railroad. (JFD)

II. DEMOGRAPHY AND HUMAN BEHAVIOR

Labor Force, Employment and Unemployment

57. OCCUPATIONAL DIFFERENTIATION IN THE U. S.

(a) Walter T. Martin. (b) In process. (c) University of Oregon, Center for Ecological Research, under sponsorship of U. S. Department of Health, Education, and Welfare, Public Health Service. (d) None.

Problem. Develop standardized age-sex specific measures in order to describe accurately and reliably major types of occupational differentiation in the U. S. and changes therein, and to develop theory capable of accounting for variations in occupational differentiation by states and SMSA's. A specific objective is to provide a procedure for gauging the degree and direction of change in occupational differentiation by color to make possible an accurate assessment of the magnitude of change in the relative positions of whites and nonwhites in American society. Similar analyses will be carried out for males versus females, and for different age groups. A second dimension of the analysis will be to establish the relationship between degree of occupational differentiation and theoretically plausible outcomes such as level of living, income, and mental and physical health.

Method. Study occupational differentiation by age, sex, and color for states and standard metropolitan statistical areas in the U. S. in 1950, 1960, and for 1950-1960. (SIE)

58. PLANT RELOCATION AND THE CORE CITY WORKER

(a) Everett J. Burtt, Jr. (b) Completed and published under the above title as HUD-7S-20. Available free of charge in single copies from Consumer Relations, Department of Housing and Urban Development, Room 1129, Shoreham Building, Washington, D. C. 20410. Copies may be purchased in quantity from Superintendent of Documents, U. S. Government Printing Office, Washington, D. C. 20402 at

\$1.00 per copy. 116 pp. (c) Boston University, Department of Economics, under sponsorship of U. S. Department of Housing and Urban Development. (d) For related research, see 13:1-9.

Problem. The effects on workers of plant relocation from inner city to suburb.

Method. Interviews were conducted with 137 workers of ten firms which moved from the Boston core to the suburbs shortly before or after 1960. Of the 137 workers, 56 continued working for the relocated establishments, 53 were newly hired, and 28 separated from the companies. The interviews explored the social and economic characteristics, housing, and effects of relocation on commuting for the three groups.

Findings. Those who separated tended to have less education, less skilled jobs, lower wages, and less seniority than those who remained with relocated firms. They cited higher commuting costs as a cause for separation. Commuting time for core workers who remained increased by more than two-thirds after relocation and one out of four switched to automobile transportation for getting to work. Among the three groups, the percentage of workers who changed residence was larger in the group that remained on the job and the tendency was to move closer to the new site of work.

Publication contains a 91-page appendix which includes statistical tables on information gathered in interviews, the actual interview schedule, and a classification of towns and cities in the Greater Boston Area. (JS)

59. THE INFLUENCE OF COMMUNITY CHARACTERISTICS ON THE RELATIONSHIP OF UNEMPLOYMENT CHANGES TO EMPLOYMENT CHANGES IN MAJOR LABOR MARKET AREAS

(a) Robert G. Bruce. (b) The research, part of the larger Criteria for Water Resources Investment project, is completed and reported under the above title as Working Paper CWR 12, July, 1967, by the Institute for Urban and Regional Studies, Washington University. (c) Washington University (St. Louis), Institute for Urban and Regional Studies, under contract with U. S. Corps of Army Engineers. (d) For other CWR reports, see 13:1-201; 14:1-172.

Problem. Examine the effect of various community and labor force characteristics on changes in labor force size, and show the relationship between these changes and unemployment and employment changes on the regional level.

Hypothesis. A general increase in employment levels will directly affect the total unemployment of a region according to the extent of changes in the labor force size of that region.

Method. Measure the extent of variation among labor markets in the relationship of employment to unemployment changes; define the social and economic variables responsible for differences among areas in labor force characteristics; using this data, establish the relationship of a change in a region's employment to its corresponding change in unemployment; and quantify the relationship and test it by multiple regression techniques.

Findings. Community characteristics, such as current rate of unemployment, ratio of females employed to total employment, rate of employment growth, and income and education characteristics are significant in explaining variations in the relationship between unemployment and employment changes. They exert influence on the extent to which improvements in local employment levels result in reductions in measured unemployment. (ML)

60. THOSE NOT WORKING IN A TIGHT LABOR MARKET, MILWAUKEE, WISCONSIN

(a) Hazel S. McCalley. (b) Completed and published under the above title, January, 1967, by Greenleigh Associates, Inc., 355 Lexington Avenue, New York, New York 10017. 101 pp. (c) Greenleigh Associates, Inc., under contract from Office of Economic Opportunity and the U. S. Department of Labor. (d) None.

Problem. Study unemployed persons in a labor market area that has a low unemployment rate but in which there is a demand for more manpower.

Method. Interviews were conducted with 1,479 persons in Milwaukee selected from those living in substandard housing units, those who had been registered with the

state employment service for six months or longer, and as the study progressed, with people in public housing and in such casual settings as bars, where out-of-work persons congregate.

Findings. There were four major groups of unemployed persons found in Milwaukee:

(1) a relatively young group of people who have been employed recently, who could get a job if they wished, but are voluntarily idle; (2) older or retired people who have not worked for a considerable period of time; (3) youths and men of prime working age who want to work but cannot find jobs due to lack of skills or work experience; and (4) women who want to work but cannot because of child-care responsibilities. (ML)

The Family

61. FAMILY STRUCTURES AND MOBILITY PROCESSES

(a) William J. Goode. (b) In process. (c) Columbia University, Department of Sociology, under sponsorship of U. S. Department of Health, Education, and Welfare, Public Health Service. (d) None.

Problem. Study the family factors in contemporary society which are instrumental or impedimental in the social processes altering social stratification systems throughout the world; the consequences of social mobility for family structures; and the relevant microscopic processes internal to the family for mobility. The study will examine these areas: (1) class differences in family skill in training for social mobility or maintenance of class position; (2) effects of different reproduction rates on mobility; (3) effect of kin network on mobility and the maintenance of kin relations under impact of geographical or social mobility; (4) effects of intra-family dynamics on aspiration, achievement motivation and creativity; (5) effect of adoption and surrogate parental care on mobility; and (6) interrelationship between modes of inheritance and family patterns with industrialization rates and social and geographical mobility.

Method. Data from published and unpublished research have been gathered during visits

in England, Germany, Japan, and India, and a research framework set up for additional collection of materials. These, together with observations of the investigator (including his studies of informal interactions within families in Japan and elsewhere) and the contributions of experts consulted in these countries, will be organized and systematized theoretically when possible. (WJG)

62. ADAPTATIONS BY URBAN WHITE FAMILIES TO POVERTY

- (a) Lee Rainwater and Alvin L. Schorr. (b) In process. (c) Washington University (St. Louis), Social Science Institute, under sponsorship of Executive Office of the President, Office of Economic Opportunity. (d) None.

Problem. Describe patterns of social organization characteristic of an urban white poor population. Results will be compared to previous data on the urban poor and the Negro poor.

Method. (1) Through participant observation, interview and survey methods, examine the "life style" of the lowest socioeconomic stratum of urban white society, focusing initially on the family and household, but examining the personal interactions of individuals within and external to these units; (2) measure the degree of variation within the white lower class on such variables as "matrifocality" and family integration at different stages of the family's development, using the family "life cycle" approach, and try to establish what conditions determine diverse adaptations to the problems imposed by their conditions of poverty. (JS)

63. CHANGE, ORGANIZATION, AND DISORGANIZATION OF THE URBAN NEGRO FAMILY

- (a) John H. Scanlon. (b) In process. (c) Indiana University, Department of Sociology, under sponsorship of U. S. Department of Health, Education, and Welfare, Public Health Service. (d) None.

Problem. To examine processes of social change within the urban Negro kinship system.

Method. Investigate conditions under which the matriarchal family form tends to remain

dominant; the conditions under which it becomes less dominant and the nuclear family form more dominant; and analyze these conditions in terms of the socialization experiences to which Negro youth (especially males) are exposed. (2) Investigate the structural and social psychological conditions under which the Negro nuclear unit remains organized or becomes disorganized in order to determine whether Negro males and females tend to have different objective relationships and subjective perceptions of the success and opportunity structure of the society (females tending to have and to perceive greater opportunities for achievement); whether structural conflict between husbands and wives over achievement and success tends to erode expressive relations, and leads to disorganization--if consensus over these values tends to support expressive relations and to maintain the marriage; and whether the differing orientations toward achievement and success are traceable to differing socialization experiences. (3) Demonstrate that change of Negro kinship patterns is related to change in socialization patterns, thus seeking to explain change as a combination of structural and social psychological variables. (JS)

64. FAMILY STRUCTURE AND ATTITUDES IN CONTEMPORARY TAIWAN

- (a) Melford E. Spiro and David K. Jordan. (b) In process. (c) University of Chicago, Department of Anthropology, under sponsorship of U. S. Department of Health, Education, and Welfare, Public Health Service. (d) None.

Problem. Study family structure and attitudes toward family structure in contemporary Taiwan. Comparatively recent industrialization and westernization have brought changes in Chinese society, particularly in the relative positions of old and young, male and female, father and son, mother-in-law and daughter-in-law, and other statuses of crucial importance in the older Chinese family system. The research will be one of the first anthropological studies of Chinese family life as lived in contemporary Taiwan.

Method. Using techniques of social-anthropology and culture-and-personality research, determine and describe the explicit rights and duties conceived to inhere in culturally

defined family roles, and study differential attitudes towards the roles themselves and towards the rights and obligations involved in them. (DKJ)

Migration

65. A STOCHASTIC MODEL OF INTERNAL MIGRATION

(a) Sidney Goldstein and Peter A. Morrison. (b) In process. (c) Brown University, Department of Sociology and Anthropology, under sponsorship of National Science Foundation. (d) None.

Problem. Evaluate the amenability of migration, as a socially-determined process, to detailed mathematical formulation. Fundamental interest lies in the possibility of developing stochastic models for the micro-analytic study of demographic processes.

Method. The study utilizes migration statistics from the Netherlands population registers. (SG)

66. CONTEMPORARY PATTERNS OF RURAL-URBAN MIGRATION IN MIDWESTERN UNITED STATES

(a) James R. McDonald. (b) In process. Results of a small pilot study, "Rural Population Loss in Three Michigan Counties, 1900-1960," reported to the Michigan Academy of Science, spring of 1966. Research on the larger project to be well advanced by summer of 1968. (c) Eastern Michigan University, Department of Geography with partial support from Social Science Research Council. (d) None.

Problem. Analyze the basic patterns of rural out-migration in the Midwestern United States; determine the identity of the migrant groups, the chronologic sequences involved, and the interaction of various factors of rural repulsion and urban attraction basic to any comprehension of why such movements occur. (JRM)

67. PROCESSES OF RURAL-URBAN MIGRATION

(a) Oscar Lewis and Douglas S. Butterworth. (b) In process. (c) University of Illinois, Department of Anthropology, under sponsorship of National Science Foundation. (d) None.

Problem. Investigate the processes of urbanization of approximately 100 Mixtec families who have migrated from the village of Tilantongo, Oaxaca, to urban centers in Mexico, such as Mexico City, Oaxaca, Vera Cruz, and Puebla.

Tilantongo and its surrounding hamlets (approximately 3,700 population) will provide a baseline for evaluating and measuring changes in the migrants and their families. Focus will be upon motives for migration, including an evaluation of the push and pull factors; routes of migration; nature, extent and consequences of continued contact with the village or hamlets; changes in occupations, income, standard of living, family structure and compadrazgo; extent of participation in the institutions of the larger society and the range of alternatives provided by an urban setting; and changes in the value system and world view of the migrants. The study of changes among Mixtec migrants to provincial capitals like Oaxaca City as compared to Mexico City will provide an additional control.

Method. Participant-observation, schedules and questionnaires, personal network analysis, life histories, family studies, and detailed genealogical studies. (OL)

68. PROSPECTIVE FERTILITY OF RURAL-URBAN MIGRANTS

(a) John J. Macisco, Jr., Thomas K. Burch, Leonard Chiazze, John Early, Leon F. Bouvier, and David Neft. (b) In process. (c) Georgetown University, Departments of Sociology and Economics, under sponsorship of U. S. Department of Health, Education, and Welfare, Public Health Service. (d) None.

Problem. Determine the effects of migration upon fertility. Specifically, ascertain whether rural-urban migrants have fertility patterns resembling those of the two-generation urbanites, or whether these migrants retain their rural fertility patterns in the urban setting. In the next decades in

Latin America, rural-urban migration will continue at an unprecedented pace. Knowledge of the fertility patterns of migrants is crucial for understanding the future size and shape of Latin American populations.

Method. Analyze data from the U. S. Bureau of the Census and special census tabulations from the Bureau of Economics and Statistics of the Puerto Rico Planning Board. These data make it possible to cross-classify fertility measures with migration status variables. (JS)

69. OCCUPATIONAL ADJUSTMENT OF RECENT LOW-INCOME SOUTHERN IN-MIGRANTS TO CLEVELAND

(a) Laure M. Sharp and Gene B. Petersen. (b) A three-phase project in process. Survey field work (Phase I) near completion; service programs (Phase II) begun; arrangements for follow-up interviews (Phase III) being made. A report on survey results tentatively scheduled for summer of 1968. Report on service programs to follow roughly three months later. (c) Bureau of Social Science Research, Inc., under sponsorship of U. S. Department of Labor, Office of Manpower Policy, Evaluation and Research, Offices of Manpower Research and Special Manpower Programs. (d) None.

Problem. Study the occupational adjustment in Cleveland of low-income southern in-migrants with less than five years of residence in the city and compare their experiences with those of long-term residents.

Method. Detailed personal interviews are being conducted with approximately 1,200 white and Negro in-migrants and 400 long-term residents located through systematic screening of low-income neighborhoods. Data from interviews will be used to appraise current employment situation, and occupational and social adjustment of the in-migrants. Unemployed and underemployed in-migrants are randomly assigned to two experimental programs. One provides a broad spectrum of services including counseling, prevocational skills elevation, and placement in vocational training or on jobs. The limited-service program is confined to counseling, urban orientation, referral to service agencies, and job-finding assistance. Research on the conduct and immediate

outcome of these programs constitutes Phase II. This portion of the study will also include approximately 300 migrants recruited through informal channels. Reinterviews with the original population, roughly 18 months from date of first interview, will be conducted during Phase III. (LMS)

70. RESIDENTIAL MOBILITY WITHIN LOS ANGELES COUNTY

(a) Georges Sabagh and Maurice D. Van Arsdol, Jr. (b) In process. (c) University of Southern California (Los Angeles), Department of Sociology and Anthropology, under sponsorship of The John Randolph Haynes and Dora Haynes Foundation. (d) None.

Problem. Describe and analyze the phenomena associated with specific patterns of intrametropolitan migration in Los Angeles County. Los Angeles County has one of the highest intrametropolitan residential mobility rates of any county within the United States, with an estimated twenty percent of the population moving each year. The findings should contribute to knowledge of an important aspect of American metropolitan life and provide information needed for more effective planning in Los Angeles County. (JS)

71. NEGRO SUBURBAN MIGRATION

(a) Sidney Goldstein and James W. Moorhead. (b) In process. (c) Brown University, Department of Sociology and Anthropology, under sponsorship of National Science Foundation. (d) None.

Problem. Examine two questions: (1) What are the socioeconomic characteristics of Negroes who move from central cities to the rings of SMSA's compared to white suburban migrants and to the Negroes who remain behind in the central city? (2) Are the suburbs to which Negroes move lower in socioeconomic status than the suburbs which attract whites only?

Hypothesis. The lower socioeconomic status of the Negro central city population does not account for the highly restricted Negro movement to the suburbs. (SG)

Urbanization

72. BALANCED URBANIZATION AND NEW COMMUNITY DEVELOPMENT

- (a) Page L. Ingraham. (b) In process. Publication scheduled for early 1968. (c) Advisory Commission on Intergovernmental Relations. (d) 13:2-164.

Problem. Examine the present total pattern of urbanization nationwide, emphasizing the whole range from small, rural towns to the largest megalopolitan concentrations; identify economic and social pros and cons of concentrating population in metropolitan centers; consider the need for a national urbanization policy which can guide specific decisions regarding programs that affect urban development; examine the potential of "rural growth centers" and "new communities" as devices for controlling urbanization; and examine the governmental and administrative techniques that can be used to encourage and regulate urban development in accordance with public policy objectives.

Method. (1) Describe the present pattern of urbanization in the country and the patterns of urban regional growth and decline; (2) review the economic, social, and political factors that influence economic development and urbanization; (3) consider governmental problems involved in evolving policies and programs to facilitate the financing, development, and governing of new communities as one of the methods to implement national policies and goals for a balanced urbanization. (PLI)

73. THE REGION'S GROWTH

- (a) Not reported. (b) Completed and published under the above title as Bulletin 105, 1967, by the investigating agency. 143 pp. (c) Regional Plan Association, 230 West 41st Street, New York, New York 10036. (d) None.

Problem. Project future urban growth and analyze its implications.

Findings. Continued growth of large metropolitan areas and the gradual growing together of adjacent urban regions are not unnatural or unhealthy as many critics have argued. The nation's additional population growth would be better served in existing

metropolitan areas than in isolated new towns if planning of these areas is improved.

The population in the 13,000-square-mile port of New York area will increase by nearly twice as many people in the next thirty-five years as it did in the last thirty-five--from nineteen million in 1965 to thirty million in 2000 compared to a 6.4 million growth between 1930 and 1965. The population in the 67,000-square-mile urban belt along the eastern seaboard is expected to rise from forty-two million to about seventy-two million. Even so, only about 14,500 square miles would be urbanized, assuming typical suburban densities and high standards of local open space. More than four-fifths of the Boston-to-Washington corridor would remain forests and farms and large public parks.

The study also summarizes policies in five countries toward growth of their largest metropolitan areas. (JS)

74. CONTEMPORARY ROLE OF HAMLETS IN APPALACHIAN NEW YORK

- (a) Joseph W. Brownell. (b) In process. (c) State University College at Cortland, Department of Geography. (d) None.

Problem. Conduct a detailed areal analysis of selected hamlets that existed in the Appalachia counties of New York during the predominantly agricultural era which reached its climax in the late nineteenth century.

Method. Identify hamlets on the early U. S. G. S. maps published at the turn of the century and select a sample of no more than fifty. Conduct on-site field work in each hamlet to determine: (1) present status of the community; (2) its primary function; (3) current land-use pattern of the lots which comprised the hamlet at the turn of the century; and (4) relationships between the hamlet and larger regional centers. (JWB)

75. THE COMPANY TOWN: A GEOGRAPHIC ANALYSIS

- (a) George L. McDermott. (b) In process. (c) State University College at Cortland, Department of Science. (d) None.

Problem. Analyze the morphology, function, and evolution of the company town, an agglomerated settlement that is now or recently has been owned by the principal employer.

Method. The project is based primarily on field work, including mapping the forms and patterns of the urban landscape and the use of interviews to obtain historical data.

Findings. Field work completed in New Jersey, New York, Missouri, Oklahoma, Oregon, and Michigan, indicates that company towns are distinctively different from other towns of comparable size in terms of general townscape features, and arrangement and number of functional areas. Furthermore, it indicates that functional changes occur when the community ceases to be owned by a company. (SIE)

76. THE BRITISH TRAVELER AND THE AMERICAN CITY, 1820-1860

(a) Ivan D. Steen. (b) In process. (c) State University of New York at Albany, Department of History. (d) None.

Problem. Trace the development of various aspects of the urban scene, as well as make possible comparisons among cities, for the years 1820-1860.

Method. The fifty largest cities, as of 1860, will be investigated through the eyes of British visitors. English travel accounts are an especially useful source for this purpose because their authors frequently observed and commented upon much the natives might overlook. Moreover, they had a basis of comparison in the cities of their native lands. The material will be examined both topically and chronologically. (SIE)

77. URBANIZATION AND POLITICAL UPHEAVAL IN WESTERN EUROPE, 1830-1960

(a) Charles Tilly. (b) In process. Findings being published in articles and monographs. (c) University of Toronto, Department of Sociology, under sponsorship of Canada Council and the Social Science Research Council. (d) 13:2-192.

Problem. Examine the connection between urbanization of a country and changes in the form, and intensity and locus of collective violence within it.

Findings. The work so far has served mainly to cast doubt on the conventional sociological argument which traces violent protest to the cutting of restraining and sustaining social bonds. The systematic testing of alternative formulations is just beginning. (CT)

Social Organization

78. THE ECOLOGY OF AMERICAN SOCIAL STRUCTURE

(a) Basil G. Zimmer, Charles B. Nam, and Mary Powers. (b) In process. (c) Brown University, Department of Sociology and Anthropology, with cooperation from Florida State University and Fordham University, Departments of Sociology, under sponsorship of U. S. Department of Health, Education, and Welfare, Public Health Service. (d) None.

Problem. (1) Describe and analyze the socioeconomic status of the population in the United States to show how the form of the status hierarchy and the interrelationships of status characteristics (status consistency types) vary within a number of significant sub-groups--primarily racial, ethnic, and housing; (2) describe how socioeconomic status and status consistency types are related to selected behavioral patterns and levels of living.

Method. Both analyses are being carried out within racial and ethnic sub-groupings and according to selected residential categories by size and type of community. Traditional census categories are used, but particular attention is focused on central city and urban fringe areas within size of metropolitan area classes and regional location. Age is employed as a control variable throughout the analysis. (BGZ)

79. SOCIOECONOMIC DIFFERENTIATION OF THE POPULATIONS IN URBANIZED AREAS

(a) Joel Smith. (b) In process. (c) Duke University, Department of Sociology, under sponsorship of National Science Foundation. (d) None.

Problem. (1) Establish the incidence of the various patterns of socioeconomic differentiation among the populations of central city, suburban, and fringe segments of urbanized areas in the United States; (2) identify the conditions that relate to the differential occurrence of these patterns. Various propositions deriving from Burgess'

theory of urban growth, central place theory, and stratification theory may also be evaluated. A major substantive by-product of the research will be a compendium of currently unavailable information on the socioeconomic composition of the suburbs and fringes of American cities in 1960.

Method. Published and unpublished census data will be used. (JS)

80. THE PROCESS OF EMBOURGEOISMENT

(a) Sidney Goldstein and Gavin G. N. Mackenzie. (b) In process. (c) Brown University, Department of Sociology and Anthropology, under sponsorship of National Science Foundation. (d) None.

Problem. Evaluate the nature and extent of structural changes in the American class structure by ascertaining whether significant numbers of skilled manual workers are, or are becoming, full-fledged members of the middle class as a result of a postwar rise in income relative to the lower grades of white collar workers. (SG)

81. POLITICAL IDEOLOGY IN AN AMERICAN CENTRAL CITY, A SUBURB, AND A SMALL TOWN

(a) Everett C. Ladd, Jr. (b) In process. (c) University of Connecticut, Department of Political Science, under sponsorship of Social Science Research Council. (d) None.

Problem. Examine and compare political ideology of elites and mass in cities, suburbs, and small towns. Literature describes older core cities, fast-growing suburbs, and declining small towns and rural areas as different Americas, affected differently by the massive and continuing change experienced by the United States in the middle decades of the 20th century. But there is little data on whether, and if so how, these differences in setting affect the ideology of elites and mass. The study will also seek to help resolve the theoretical and technical problems now confronting the study of ideology.

Method. The community study approach will be used with research conducted in three Connecticut communities. Mass and leader-

ship surveys will constitute the chief source of data. (ECL)

82. CLASS CONSCIOUSNESS AND THE UPROOTED: A STUDY OF VOTING BEHAVIOR

(a) Sidney Goldstein and John M. Goering. (b) In process. (c) Brown University, Department of Sociology and Anthropology, under sponsorship of National Science Foundation. (d) None.

Problem. Determine whether ethnic factors are more relevant in the determination of political action than is social class.

Method. Study is based on survey data for Providence, Rhode Island, which permit evaluation of the relative predictive power of class and ethnic group identification for voting behavior. (SG)

83. MEXICAN-AMERICANS IN AN URBAN SETTING

(a) Paul M. Sheldon. (b) In process. (c) Occidental College, under sponsorship of The John Randolph Haynes and Dora Haynes Foundation. (d) None.

Problem. Study attitudes and community participation among Mexican-Americans in the Los Angeles area, to provide background information concerning their ways of life and attitudes as a basis for inquiries into particular aspects of their role in the larger community, and to permit recommendations that might lead to the advancement of Mexican-Americans at a rate more nearly commensurate with that of the total population. (SIE)

84. GANG FORMATION IN AN URBAN MEXICAN-AMERICAN SLUM

(a) Clark S. Knowlton and Salvador Ramirez. (b) In process. (c) University of Texas, Texas Western College, Department of Sociology. (d) None.

Problem. It has been noted that Mexican-American gangs in El Paso appear, disappear, and reappear again in ten-year cycles. The reason or reasons for these cycles will be investigated and the structure of Mexican-American gangs analyzed. (SIE)

85. ESKIMO AND INDIANS IN CANADIAN ARCTIC TOWNS

(a) John J. Honigmann. (b) In process. Data being analyzed. Preparations being made for further field research. (c) University of North Carolina, Institute for Research in Social Science. (d) None.

Problem. Determine particular social characteristics of Indians or Eskimo that favor certain courses of modernization in contemporary far northern towns.

Method. Field work has been carried out in Schefferville, Quebec; Frobisher Bay, N.W.T.; Inuvik, N.W.T.; and Churchill, Manitoba. Data in hand include individual background information on age, ethnic status, schooling, marital status, and other variables for over 1,000 persons of native backgrounds, as well as quantitative and qualitative data on employment, associational membership, use of alcohol, extent of social assistance, visits to well-baby clinics, court appearances, child rearing, and other topics. Special attention has been paid to social stratification and attendant problems in the rapidly growing, planned town of Inuvik. Several hundred still photographs have also been collected. (JJH)

86. SOCIAL STRATIFICATION, RELIGIOUS SOCIAL MOVEMENTS, AND ATTITUDES TOWARD SOCIOECONOMIC DEVELOPMENT IN AN AFRICAN URBAN AREA

(a) David Wiley. (b) In process. (c) Princeton Theological Seminary, Department of Sociology, under sponsorship of Social Science Research Council. (d) None.

Problem. Analyze the relationship of social stratification position, membership in religious collectivities, and attitudes toward socioeconomic change in an urban African population. Specifically, study: (1) the nature of developing urban African stratification systems in the modern sector of the economy and society; (2) relationship of actor social position to his membership in religious collectivities; (3) function of religious collectivities in effecting actor perception of social change; (4) relationship of social position and religious movement ideology to changing attitudes toward the "traditional" and "modern" in urban

African society; (5) perception of change in facilities, roles, organizations, norms, and values in modern Africa by persons in varying social positions and with differing frames of reference; and (6) the emergence of voluntary associations as an indicator and concomitant of modernization in an urban African community.

Method. The research is being conducted in a modern African capital of about 200,000 people. Prime sources of data include: (1) interview schedule administered to about 800 residents of an urban African suburb and a stratified sample of members of religious collectivities; (2) content analysis of the speeches, sermons, prayers, and public pronouncements made by leaders of the religious collectivities; (3) experimental mail questionnaire to 3,500 "innovators" in the modern sector of the society; and (4) census of voluntary associations of Zambia registered since 1958 with government Registrar of Societies concerning their size, social status levels, functions, and date of origin. (DW)

87. INVESTIGATION OF URBAN SOCIAL RELATIONS BY MEANS OF TIME BUDGETS AND NETWORK ANALYSIS

(a) Charles Tilly. (b) In process. Present phase largely methodological. (c) University of Toronto, Department of Sociology. (d) None.

Problem. (1) Develop means of coding reports people give of a day's activities without loss of flexibility and detail normally imposed by pre-established codes; (2) compare reports of social interaction contained in time-budgets with the more usual aggregate reports of frequency of contact with kinfolk and friends; (3) devise means of analyzing reports of networks of individuals linked by kinship, friendship, and other ties.

If the technical problems are solved, the investigator expects to test ideas concerning the relationships among conditions of migration to a city, the formation of different kinds of interpersonal networks, and the development of different sorts of local attachments. (CT)

88. THE EFFECT OF WORKING HOURS ON SOCIAL PARTICIPATION

(a) Walter T. Martin. (b) In process. (c) University of Oregon, Department of Sociology, under sponsorship of National Science Foundation. (d) None.

Problem. Determine how differences in the specific hours of the day spent at work affect the amount and types of social participation.

Method. Two groups were interviewed, one on a normal time schedule, the other engaged in work during the free time periods of those on an 8 a.m. - 5 p.m. schedule. Respondents were asked to recall participation in associational, informal, and family activities over a short time period. Comparisons between the groups were made on frequency, duration, and types of social participation of the two groups. (WTM)

Social Disorganization

89. THE LOS ANGELES RIOT STUDY

(a) Nathan E. Cohen. (b) Completed. Summary report issued August, 1967. Specific research projects within the study were: Nathan E. Cohen, "Inventory of South Central Los Angeles Prior to the Riot" and "Policy and Program Implications-Recommendations"; Jerome Cohen, "Social Services in South Central Los Angeles"; Eugene L. Loren, "Economic Background--The Los Angeles Riot Study"; Richard T. Morris and Vincent Jeffries, "White Reaction Study"; Raymond J. Murphy and James Watson, "Structure, Grievance and Support for the Riot"; Walter J. Raine, "The Ghetto Merchant Survey" and "The Perception of Police Brutality in South Central Los Angeles Following the Revolt of 1965"; Harry M. Scoble, "Negro Politics in Los Angeles: The Quest for Power"; David O. Sears, "Riot Participation," "Negro Attitudes Toward the Riot," "Political Attitudes of Los Angeles Negroes," and "The Riot and Blocked Mechanisms of Grievance Redress"; Thomas M. Tomlinson, "Negro Attitudes Toward the Riot" and "Militance, Violence and Poverty; Ideology-Foundation for Action"; and Diana Tenhouten, "Los Angeles Riot Study:

Method and Procedures." (c) University of California (Los Angeles), Institute of Government and Public Affairs. (d) 12:2-16; 14:1-18.

Problem. Investigate and analyze the Los Angeles race riots.

Method. The study was initiated immediately after the 1965 riots. During the five months following the riots, 2,070 personal interviews were collected in a survey which sampled seven basic populations: (1) Negro curfew area residents; (2) Negro riot arrestees; (3) white residents of greater Los Angeles; (4) white curfew area residents; (5) Mexican-American curfew area residents; (6) social service workers; and (7) merchants who incurred damage during the riots. The sample of Negro curfew area residents was a random sample, stratified by age, sex, and income. The interview schedule covered questions of attitude toward the riots, activity in the riots, general social and political attitudes, and background information. Interviewers were selected from the area.

Findings. There is a growing body of myths emerging about the riots which tend to divert attention from the social ills responsible for the riots. The idea that they were caused by outside agitators is negated. The pre-riot conditions in South Central Los Angeles reflect the entire gamut of social problems in the slum ghetto: deficits in employment, housing, education, health, and welfare services. Grievances of the people in the area are numerous and include practices of merchants operating in the community, various types of discrimination, and alleged forms of mistreatment by the police. Poor neighborhood conditions was cited as the leading gripe. The Negro community is ambivalent toward the riots, but a majority see them as bringing positive results. Since the riots, white political and civic leaders have apparently become more responsive to Negro demands. However, this responsiveness is more verbal and visible than it is substantive.

Division of authority and function among different levels of government makes it difficult to pursue even a single goal such as housing. The general political and governmental structure inhibits effective Negro political action. Crucial programs such as model cities, rent supplements, aid to education, the community action program of OEO, and rat control have become

political footballs. More basic programs such as a massive public works project, guaranteed jobs, encouragement of the private sector to participate in slum problems through tax incentives, and a guaranteed annual income have not reached the drawing board.

Another key consideration is the growing polarization of three groupings in the Negro community: the "traditionalists," who have stressed individual success of Negroes; the "survivalists," those in dire economic stress; and a growing third group, the "militants," who are more action oriented and endorse development of economic and political power, now referred to as "Black Power." The militants are competing for leadership with the traditionalists and are growing more attractive to the survivalists.

A comprehensive approach to the racial problem is needed, reflecting knowledge of the differential aspects of the three groupings, their interrelationships, the core of their common concerns as well as their differences. This will necessitate dialogue with representation from all three groups. The question of jobs should be first on the agenda, followed by poor neighborhood conditions, discriminatory practices, and social control malpractices.

The white community is important to the solution of the problems. The Negro community is looking to it for tangible evidence that the nation has not lost its sense of commitment to what they had come to believe was being regarded as the major problem of our times. They are pondering the various solutions being debated within their own ranks. Their direction will be affected markedly by the economic, political, and social climate. If, for example, they discern a regressive climate which stresses increased police power as the answer--similar to the back-to-the woodshed theory in delinquency--rather than to alleviating disease and joblessness, the program of the extreme "militants" will of necessity find favor. (JS)

90. THE ORIGIN AND CONTROL OF COMMUNITY VIOLENCE

(a) John P. Spiegel. (b) In process. Preliminary findings issued in report June, 1967. Available from The Lemberg

Center for the Study of Violence, Brandeis University, Waltham, Massachusetts. (c) Brandeis University, The Lemberg Center for the Study of Violence. A portion of the study contracted to Roper Research Associates with funds from Ford Foundation. (d) None.

Problem. A study of race relations in six northern cities to develop a set of predictors to serve as an "early warning system" of impending violence, and to determine what sorts of community interactions and processes decrease strain and avert violence.

Method. Three of the cities selected for the survey and study experienced riots during the summer of 1966 and three did not. Each riot city was paired with a nonriot one which had at least some similarities or points of interest in common, thus reducing the extraneous environmental factors that could make one city more riot-prone than another. Cities studied were Cleveland, Pittsburgh, Dayton, Akron, San Francisco, and Boston. In each, a cross section of 500 Negroes and 500 whites, 18 years of age and over, was interviewed with a questionnaire drawn up for the survey. Samples were confined to city limits and did not include suburban areas. A method of modified probability sampling was used. The questionnaire contained over ninety questions.

Findings. (1) High levels of dissatisfaction with job opportunities, housing, school integration, police behavior, and efforts of federal and local governments to encourage integration characterize the feelings of Negro populations in all six cities. (2) Cities vary on the dissatisfaction index but dissatisfaction in all is sufficiently high so that any one of them could have a riot given an instigating incident. (3) A riot is the product of the interaction of two factors: the level of dissatisfaction within the Negro population of a city, and an inflammatory incident which triggers a disturbance. The higher the level of dissatisfaction, the lower need be the inflammatory power of the precipitating incident, and vice versa. (4) While the gap between Negroes and whites in regard to the pace of change, and the cause and prevention of riots is quite large, the attitude of whites seems to be based on ignorance of or indifference to the factual basis of Negro resentment and bitterness. (5) Though disliking violence and troubled with mixed feelings about its effects, Negroes are shifting to the opinion that

only intense forms of social protest can bring relief from social injustice. Negroes and whites agree that riots have produced some long-delayed action by city governments to increase opportunities for Negroes. (6) High levels of Negro dissatisfaction are correlated with high levels of feeling that the city government has done too little to encourage integration. The perceived attitude of the city government toward integration and increased opportunities for Negroes seems to be the key factor in determining the riot potential of a city. (7) Two conclusions can be drawn: (a) if city governments were to take more active steps to increase opportunities for Negroes the riot potential within the ghetto would be reduced; (b) if white populations generally had a fuller appreciation of the just grievances and overwhelming problems of Negroes in the ghetto, they would give stronger support to their city governments to promote change and to correct the circumstances which give rise to the strong feelings of resentment of ghetto populations. (JS)

91. AMERICAN RIOTS, 1830-1865

(a) David Grimsted. (b) In process. Book manuscript expected by summer of 1969. (c) Harvard University, Charles Warren Center for Studies in American History, under sponsorship of Social Science Research Council and the National Humanities Foundation. (d) None.

Problem. An investigation of American riots between 1830-1865, their purposes and participants, public and legal reactions to them, and their effects, to better understand the central assumptions, moods, and problems of Jacksonian democracy and American democracy, generally.

Riots were not an unprecedented phenomenon in America in the 1830's. Yet in these decades they were more frequent, more varied, and less readily condemned publicly or legally than before. There were three major types of riot with respect to cause. Some, such as theatrical riots, were politically neutral; others were carried out by such relatively weak groups as workingmen or debtors; and the majority were directed against minorities such as Catholics, Negroes, abolitionists, Mormons, or Masons. Distinguishing among these kinds and the reactions to them should help make clear to what extent rioting was tolerated on the grounds

of its representing and enforcing popular sentiment, and to what extent it seriously threatened minority opinion.

Method. Examine articles on specific riots and examine secondary studies on topics such as abolition, labor, Mormonism, Catholicism, and nativism that refer to riots to obtain lists of disturbances. Study these riots by looking at local police and court records, diaries and letters, newspapers and contemporary accounts. Relate these specifics to contemporary legal political theory. The studies of crowd behavior from Le Bon to Smelser are being considered, Rude's work, in particular. (DG)

92. URBAN CRIME AREAS

(a) Calvin F. Schmid. (b) In process. (c) University of Washington, Department of Sociology. (d) None.

Problem. An ecological study of crime in a large American city.

Previous Research. The study is a partial replication and extension of earlier ones by the investigator, "Urban Crime Areas: Part I," American Sociological Review, 25 (4), 1960, pp. 527-542; and "Urban Crime Areas: Part II," American Sociological Review, 25 (5), 1960, pp. 655-678.

Method. The study utilizes crime rates based on detailed data differentiated into relatively specific and precise categories. The crime rates are composed of two separate series, offenses known to the police and arrests. To determine the basic factors in the distribution of crime as well as identify and describe crime areas, the crime indices have been related to a large number of significant social, demographic, and ecological attributes. The basic data consist of 22 offense rates, 14 arrest rates, and 26 socioeconomic and demographic indices derived for 115 census tracts in the city of Seattle. The crime data were obtained from the Seattle Police Department for 1959-1961; the socioeconomic and demographic data were derived from the 1960 decennial census of population and housing. A matrix of product-moment correlation coefficients was constructed for all 62 variables as a basic, preliminary, analytic step. The matrix was then subjected to factor analysis. (JS)

93. CHILDHOOD PREDICTORS OF MOBILITY AND CRIMINALITY

- (a) Lee N. Robins and George E. Murphy.
(b) In process. (c) Washington University, Department of Psychiatry, under sponsorship of U. S. Department of Health, Education, and Welfare, Public Health Service. (d) None.

Problem. Investigate the nature of the interaction of class position and deviant behavior. Two hypotheses are being tested: (1) that the high rate of Negro crime and family disruption can be accounted for largely by low socioeconomic status of Negroes: (2) the obverse hypothesis, largely ignored in current sociological theory, that the heavy concentration of Negroes in the lower class in metropolitan centers is a consequence of the high rate of juvenile crime and antisocial behavior of Negro boys' and of the Negro boys' experience with fathers who themselves have high rates of antisocial behavior expressed by desertion and nonsupport of their families.

Method. These hypotheses are being tested through a longitudinal study of a sample of an urban population of Negro boys with normal IQ still living in the city of their birth. The study will evaluate relative importance of childhood socioeconomic status, childhood behavior problems, and lack of a father in the childhood home in determining their adult socioeconomic status and their adult arrest records; explore a number of social and psychiatric variables which appear related to the ability to overcome handicaps existing in childhood. (LR)

94. EPIDEMIOLOGICAL VECTORS OF DEVIANT BEHAVIOR IN YOUTH

- (a) Isidor Chein, Ardyth Stimson, John Stimson, Louis Wilker, and Mary Snow.
(b) The research is a continuation of an ongoing project. General theory and procedures of project are described by the investigators in "Some Epidemiological Vectors of Delinquency and its Control: Outline of a Project" and in previous progress reports. (c) New York University, Research Center for Human Relations, under sponsorship of U. S. Department of Health, Education, and Welfare, Public Health Service. (d) None.

Problem. (1) Assess the impact of community change on the incidence of delinquency, school drop-outs, syphilis in teen-aged youth, and out-of-wedlock childbirths among females under twenty-one years of age; and (2) investigate the role of a large number and variety of characteristics of geographical areas of New York City in the epidemiology of these dependent variables. (SIE)

95. HOMELESSNESS: ETIOLOGY, PATTERNS, AND CONSEQUENCES

- (a) Theodore Caplow and Howard M. Bahr.
(b) In process. Completion expected December, 1967. (c) Columbia University, Department of Sociology, under sponsorship of U. S. Department of Health, Education, and Welfare, Public Health Service. (d) None.

Problem. Determine how men become homeless and what effects the condition of homelessness has on their lives and on the larger society. Findings will contribute to knowledge of the relation between social isolation and integration, and will have implications for the study of anomie, alienation, deviance, marriage and family life, and the sociology of work.

Method. Research is concentrated in Manhattan, particularly the Bowery Area. Major work is: (1) to obtain life-history information from a sample of homeless men and control samples of lower-income and upper-income men in settled family areas; (2) analyze these data to specify antecedents and concomitants of minimal affiliation with family, jobs, and organizations; (3) conduct a series of censuses on the Bowery and examine the contacts of homeless men with city agencies. (TC)

III. THE URBAN AND REGIONAL ECONOMY

Economic Theory

96. REGIONAL ECONOMICS, A STUDY IN THE STRUCTURE, STABILITY, AND GROWTH OF REGIONS

- (a) Hugh O. Nourse. (b) Completed. To be published February 1, 1968, under the above title by McGraw-Hill Book Company. (c) None. (d) None.

Problem. To summarize and integrate the economic analysis relevant for understanding the spatial allocation of resources. Intended for undergraduate majors in economics, and graduate students in geography, urban planning, history, and others interested in urban and regional economics. Although the analysis is not new, the presentation is.

In the first section of the book the theory of the location of industry is described using traditional tools of economic analysis. This model is then used to develop economic models explaining the distribution of city sizes, location of manufacturing industry, and land-use patterns. Once the spatial distribution of economic activity is explained using these models, the concept of a region is explored. The last section of the book deals with the measurement of economic activity within a given region and the short- and long-run analysis of change in income and employment. (HON)

97. WHY GROWTH RATES DIFFER--POSTWAR EXPERIENCE IN NINE WESTERN COUNTRIES

(a) Edward F. Denison and Jean-Pierre Poullier. (b) Completed. Published in 1967 under the above title and available from the Brookings Institution, 1775 Massachusetts Avenue, N. W., Washington, D. C. 20036. 494 pp. \$12.50 per copy, cloth; \$4.95, paper. LC No. 67-27682. (c) The Brookings Institution. (d) None.

Problem. Compare the economic performances of Belgium, France, Denmark, Germany, Italy, the Netherlands, Norway, the United Kingdom, and the United States. Two specific purposes are to test how well the methodology used to analyze the American experience can explain the wide divergence of growth rates among European countries, and secondly, to determine whether European countries obtained higher growth rates because they were doing more than the United States to obtain growth.

Previous Research. Edward F. Denison, The Sources of Economic Growth in the United States and the Alternatives Before Us.

Method. Isolate the sources of growth of real national income between selected dates and quantify their contributions. More than 20 factors are identified as "sources

of growth" and measured for the period 1950-62. Some are physical inputs of land, labor, and capital. The results are arranged in nearly 200 tables to allow full-scale comparison of sources of economic growth.

Findings. Western Europe's economic growth has substantially outstripped that of the United States since the end of World War II. However, the impression of postwar Europe's superior economic dynamism may be somewhat larger than the reality; Europe's achievement derives from different sources than has been generally supposed; it is less promising as a model for American emulation than might be hoped. Findings suggest a continuation of Europe's high growth rates per person employed in the future. Employment will be increasing much more in the United States than in Europe, but higher growth rates of national income per person employed in Europe than in America seem probable in the decades ahead. Contrary to what is sometimes believed, it is misleading to equate high and low growth rate statistics with "good" and "bad" economic functioning. The low past and prospective standing of the United States in the "International Growth Rate League" is not an indication of poor performance. Rather, it has come about because the same sorts of change produce larger percentage increases in national income in Europe than they do in the United States; in addition, there are opportunities to increase efficiency in European countries that do not exist in the same degree in the United States. Consideration of the principal sources of growth shows that the United States has not lagged in exploiting its possibilities. (JS)

98. THE SELF-SUSTAINING CITY

(a) William J. Baumol, David F. Bradford, John D. Heinberg, E. Philip Howrey, and Wallace E. Oates. (b) A three-year project in process. Completion scheduled tentatively for summer of 1970. (c) Princeton University, Department of Economics, under sponsorship of Brookings Institution. (d) None.

Problem. Study the process of urban change to better understand how public policy can influence the course of development of the cities. The central concern is the process of cumulative deterioration of the central cities in the United States. The term cumulative is stressed because the urban

problem is seen as being of a dynamic character. It is hypothesized that over time social and economic forces have led to a process of continued and cumulative decay of many dimensions of city life.

Method. Develop formal, dynamic models to describe the process of urban decay. Drawing on past work in the theory of economic dynamics and in mathematical ecology, determine the critical forces at work in the urban economy. (Preliminary work suggests that certain intuitively-plausible public policies may treat only the symptoms of the problem and may have no permanent effect on the course of urban development. To improve the long-run prospects of the cities may require policies of a far more subtle character than we have previously realized.) Econometric techniques will be employed to test the various models and to obtain estimates of the magnitudes of the key parameters. It is hoped that these results will provide a basis for evaluating the potential of an assortment of public policies. The ultimate aim is to set forth these policy choices with an estimation of the probable effects and the cost of each. (WJB)

99. COST OF URBAN INFRASTRUCTURE FOR INDUSTRIAL DEVELOPMENT

(a) Richard Morse, K. Krishnaswamy, and O. P. Mathur. (b) In process. Field work to be completed by end of 1967. Results of first analyses to be completed by mid-1968. (c) Stanford Research Institute, with cooperation of School of Planning and Architecture (New Delhi, India) and Small Industry Extension Training Institute (Hyderabad, India), under sponsorship of U. S. Agency for International Development. (d) None.

Problem. Examine comparative costs of supplying physical and social infrastructural facilities required by industry in urban centers of different sizes in newly industrializing countries to provide better knowledge of direct urban costs, necessary in framing programs for industrial decentralization and urban development. Infrastructure is broadly defined to include physical facilities such as power, sewerage, education, and housing.

Hypothesis. There is a minimum economic base, related to city size, below which

unit costs of incremental infrastructure required for industrial growth are very high; above this minimum, the unit costs of incremental infrastructure decrease significantly with increasing industrial requirements over some range of city size; and above this range, unit costs of incremental infrastructure increase significantly with increasing industrial requirements.

Method. The major field work is being undertaken in India. The studies are concerned mainly with the costs of industrial urban infrastructural requirements. In addition, infrastructure facility requirement coefficients are being developed for potential industry entering the region. Particular emphasis is given to agricultural related industries. (RFS)

100. IMPACT OF SCIENCE AND TECHNOLOGY ON REGIONAL DEVELOPMENT

(a) Bruce W. Macy, James M. Bednar, and Robert E. Roberts. (b) Completed and published in 1967 under above title. Available through Communication Service Corporation, 1150 Connecticut Avenue, N. W., Washington, D. C. 20006. 168 pp., charts, tables. Contains 95-item annotated bibliography. \$4.00. (c) Midwest Research Institute, under contract with U. S. Department of Commerce, Office of Regional Development Planning. (d) None.

Problem. The impact of science-government-industry complexes has led to a popular assignment of almost mystical properties to the power of science and technology in regional development. City after city has attempted to use these forces to enhance development. Some have been successful, most have not, and for reasons remaining obscure. This study reviews the available knowledge on the subject and assembles this body of basic information into one document. (CSC)

101. RURAL SOCIAL STRUCTURAL DIFFERENTIATION IN THE GROWTH AND/OR DECLINE OF COMMUNITIES

(a) Paul E. Ebert. (b) In process. (c) Cornell University, Agricultural Experiment Station, under sponsorship of U. S. Department of Agriculture,

Cooperative State Experiment Station Service. (d) None.

Problem. Study structural differentiation in the growth and/or decline of New York State communities to help establish a basis for regional analysis. Specifically: (1) specify the functional specialization and differentiation in communities; (2) determine whether such specialization and differentiation continues from one decade to the next, as communities grow and decline; (3) determine whether the concentration and/or organization of elites differs and contributes to the growth or decline of these communities.

Method. Data will be obtained from the U. S. Censuses of 1950 and 1960 for all communities of 2,500 people or more in New York State. Additional data will be obtained through secondary sources and, as necessary, mailed questionnaires to selected city officials. Analysis will involve detailed cross-tabulations and statistical presentations which can be handled through existing computer programs. (SIE)

Economic Accounting

102. DESIGN OF REGIONAL ACCOUNTS

(a) Charles L. Leven and John Legler.
(b) A continuing project, in process. Recent Working Papers include the following: Henry R. Hertzfield, Patterns of Population Density in St. Louis, DRA 4, June, 1967; James Freund and Kenneth Wieand, Discussion of Some Factors Affecting Labor Productivity, DRA 5, June, 1967; and James L. Grunloh, Alternate Measures of Fiscal Capacity, DRA 6, August, 1967. Available from Institute of Urban and Regional Studies, Washington University, St. Louis, Missouri 63130.
(c) Washington University (St. Louis), Institute for Urban and Regional Studies, under sponsorship of Resources for the Future, Inc., Committee on Urban Economics. (d) 13:1-200.

Problem. Design of a standardized system of regional accounts for the United States.

Findings. With respect to the intra-area distribution of regional activity, Working Paper 4 examines St. Louis in terms of the theory that cities have developed in ring-

like patterns, emanating from the central business district, to determine if any such pattern exists in the location of the residential population of St. Louis over time. In general, the outlines of such a pattern were observed, but were not as distinct as one might have supposed and a number of exceptions appeared. Working Paper DRA 5 discusses some of the conceptual issues involved in formulating realistic measures of three particular factors potentially relevant to output of labor per worker: formal education, on-the-job training, and mobility. Working Paper 6 examines alternate ways in which to measure fiscal capacity. It considers income as opposed to equalized assessed valuation of property as measures of taxable capacity, as well as the possibility of calculating yields from a representative tax system. While the study does not resolve the issue of which is more appropriate, it does illustrate that the issue is one of real substance in that substantial differences appear, depending upon which measure is used. (CLL)

103. PERSONAL INCOME IN METROPOLITAN AREAS

(a) Robert E. Graham, Jr., and Edwin J. Coleman. (b) Continuing project, in process. First results published as "Personal Income in Metropolitan Areas: A New Series" in Survey of Current Business, Vol. 47, Number 5, May, 1967, page 18. (c) U. S. Department of Commerce, Office of Business Economics. (d) 12:1-107.

Problem. Preparation of personal income estimates for all Standard Metropolitan Statistical areas for 1929, 1940, 1950, 1959, and 1962. It is anticipated that the series will be updated to 1965 and 1966 during 1968 and be continued thereafter on an annual basis.

Method. A few technical notes are included in the article mentioned above. An earlier description of the general methodology is given in "Measuring Regional Market Growth," Survey of Current Business, January, 1959. A comprehensive description of the sources of data and methods used in preparing income estimates in SMSA's will be published upon completion of estimates for the entire country.

Findings. In this preliminary article, estimates for the five selected years are presented for 97 SMSA's, as well as the

non-SMSA portions, of 24 states, in three broad geographical groups--the Northeast, the Southeast, and the Northwest. A descriptive analysis is also presented.

From 1929 to 1962, personal income in the 97 SMSA's rose 333 percent. For the non-SMSA's the increase was 427 percent. Population gains in the same period were 52 percent in the SMSA's, and only 23 percent in the non-SMSA's. Thus, per capita income grew much more rapidly in the non-SMSA's (328 percent) than in the SMSA's (185 percent). As a result, SMSA per capita income, which in 1929 was about two and one-half times that of non-SMSA income, was, in 1962, only three-fifths higher. Comparative changes by region, by size of SMSA, and by income composition are discussed, together with the factors affecting these changes. It is hypothesized that, with respect to per capita income increase, the section of the population that migrated from the non-metropolitan to the metropolitan areas has so far been unable to achieve the income levels of its new environment, and has, therefore, limited the relative rise of average income in SMSA's, thus contributing to many of the problems facing metropolitan areas today, notably in the central cities. (SK)

104. INTRA-COUNTY ALLOCATION OF COUNTY INCOME ESTIMATES

- (a) Scott Keyes and Betty C. Churchill.
 (b) Preliminary draft of report completed, July, 1967. 36 pages. Mimeographed. Available from agency. (c) University of Illinois, Bureau of Community Planning. (d) 11:2-16.

Problem. To devise a method for making intra-county allocations of county personal income estimates.

Findings. Preparation of estimates of aggregate and per capita personal income by counties based on the U. S. Department of Commerce estimates of personal income by states is a commonly accepted type of economic accounting. Essentially the procedure consists of using a variety of allocators to distribute particular types of income, and reaggregating these distributions by counties. One of the difficult problems is the so-called "situs adjustment"--i.e. income earned in one county by persons who reside in another county. The commuting problem becomes sufficiently formidable when intra-county allocations are attempted as to require a different procedure.

The method presented in this paper involves sample surveys of employers and households to determine place of work and place of residence of employed persons. Earned income estimates are then distributed by use of a matrix in which both lines and columns use the desired geographical breakdown within the county. The lines show for each area income produced according to the areas to which it is distributed, and the columns show for each area income received according to the areas in which it is earned. In addition to making conceptually valid estimates possible, this method helps to bring local economic interrelationships into focus. The paper includes a case study of Warren County, Illinois. (SK)

Economic Development

105. PACIFIC NORTHWEST ECONOMIC BASE STUDY FOR POWER MARKETS

- (a) See below. (b) In process. Twenty-seven reports being published over a two-year period to be compiled upon completion as Volume II. Volume I will be a summary. Completed reports, listed below, available from Chief, Branch of Power Marketing, Bonneville Power Administration, P. O. Box 3621, Portland, Oregon 97208. Separate requests should be made for each report. (c) U. S. Department of the Interior, Bonneville Power Administration. (d) None.

Problem. An overall base study of future developments in major industries intended to provide information needed to estimate future power requirements in the Pacific Northwest. The area covered comprises the major part of the Columbia River drainage basin within the U. S. boundaries. This includes all of Idaho, Oregon, Washington, and 11 counties west of the Continental Divide located in Montana.

Method. The Bonneville Power Administration supplied the general procedure to be followed in all the surveys, as well as the basic assumptions on which the reports are to be based. Among these are: there will be no general war nor any appreciable cessation of cold war activities; there will be sufficient power available in the Pacific Northwest for development of large power using industries, and the region will maintain an advantage over other parts of the

country in power rates through 1985. Gross National Product is projected to grow at 4.5 percent from 1960 to 1965, and at 4 percent from 1965 to 1985.

Findings. The following reports are completed and available: Part 1, Donald J. Morey, Population, trends by power supply area, 1950-1960. Part 2, Donald J. Morey, Labor Force, participation rates by power supply area, 1950-1960. Part 4, James E. Maxwell, Personal Income, surveyed by counties, 1950-1961. Part 5, U. S. Department of Agriculture, Economic Research Service, Farm Production Economics and Marketing Economics Division, Agricultural Production and Food Processing, projected from 1960 to 1985. Part 6, Donald R. Gedney, Carl A. Newport, and Dwight Hair, Prospective Economic Developments Based on the Timber Resources of the Pacific Northwest. Part 7, Minerals--Part 7A, N. S. Petersen and W. N. Hale, Abrasives, trends and outlooks for manufacture of artificial abrasives. Part 7B, Ivan Bloch and Samuel Moment, The Aluminum Industry. Part 7C, Richard W. Knostman and Gary A. Kingston, Copper, Lead, and Zinc Industries. Part 7D, Gary A. Kingston and Robert A. Miller, Alloy Metals Outlook. Part 7E, Frank B. Fulkerson and Jerry J. Gray, The Magnesium Industry. Part 7F, Gary A. Kingston, The Steel Industry. Part 7G, Frank B. Fulkerson and Jerry J. Gray, The Titanium Industries. Part 9, Myron Katz, Potential for the Recreation and Tourist Industry. Part 10, G. L. Bodhaine, B. L. Foxworthy, J. F. Santos, and J. E. Cummins, The Role of Water in Shaping the Economy. Part 11, Fuels--Part 11A, Harry Perry, Max R. Geer, and Columbus R. Gentile, Potential for the Coal Industry. Part 11C, Conkling, Inc., Consultants, Potential for the Petroleum Industry. Part 13, Chemicals, Part 13E, Norman S. Petersen, The Phosphate Rock Industry. Part 13F, William N. Hale and Norman S. Petersen, Sulfur Consumption. (JS)

106. INVENTORY OF ECONOMIC STUDIES FOR THE PACIFIC NORTHWEST, 1966

- (a) Economic Studies subcommittee.
- (b) Completed April, 1967, and available from Chairman, Economic Studies subcommittee, Columbia Basin Inter-Agency Committee, Box 4208, Portland, Oregon 97208. (c) Columbia Basin Inter-Agency Committee, Economic Studies subcommittee. (d) None.

Problem. Provide a means for exchange of information and for promotion of coordination of research among public agencies and others conducting studies related to the resources and economic development of the region. The resulting document is an annotated bibliography of 315 entries of current economic studies by federal, state, and local government agencies and private organizations in the Pacific Northwest. (ML)

107. ECONOMIC GROWTH AND ADJUSTMENT IN THE UPPER MIDWEST: 1960-1975, A SUPPLEMENT TO THE UPPER MIDWEST ECONOMIC STUDY

- (a) James M. Henderson and Anne O. Krueger, with assistance from R. Ramanathan. (b) Completed and published January, 1967, under the above title. Available from The Upper Midwest Research and Development Council, 950 Federal Reserve Bank Building, Minneapolis, Minnesota 55440. (c) Upper Midwest Research and Development Council. (d) 9:1-43-46; 9:2-81-83.

Problem. To update the information and projections presented in the earlier, main volume, National Growth and Economic Change in the Upper Midwest, focusing upon economic growth from 1960 to 1965 and projecting growth through 1975. The new information, together with the earlier volume, is intended to provide a departure point for actions to stimulate economic growth in the Upper Midwest states.

Previous Research. James M. Henderson and Anne O. Krueger, National Growth and Economic Change in the Upper Midwest (Minneapolis: University of Minnesota Press, 1965).

Findings. The supplement contains: (1) a framework for the interpretation of economic growth in the Upper Midwest, and contrasts the region with the United States as a whole; (2) a broad discussion of economic developments in the Upper Midwest from 1960 through 1965; (3) the revised projections for 1965-1975; and (4) additional detail on actual and projected developments for each of the four Upper Midwest states covered by the report--Montana, North Dakota, South Dakota, and Minnesota. (JS)

108. ENTRY AND JOB CHANGING IN A LARGE METROPOLITAN AREA

(a) Lloyd Ulman and Margaret S. Gordon.
 (b) A five-year project in process. Completion scheduled for 1971. (c) University of California (Berkeley), Institute of Industrial Relations, under sponsorship of U. S. Department of Labor, Office of Manpower Policy, Evaluation and Research. (d) None.

Problem. Analyze changes in current and projected labor demand and supply, and processes of adjustment to these changes, in the San Francisco Bay Area, with a view to determining their impact on educational requirements and employment opportunities, by age, education, race, and occupation.

Method. Primary orientation is toward basic labor market analysis. (1) Analyze published and unpublished statistical data relating to the characteristics of the San Francisco labor area and to changes in labor demand and supply in the area; (2) conduct a survey of employer policies and practices, including a mail questionnaire directed to approximately 1,000 firms and interviews with a selected subsample of 100 to 150 firms; (3) conduct a survey of union policies and practices, including interviews with a selected sample of 100 to 150 union representatives in the Bay Area; (4) conduct a survey of employment agencies, placement services, and junior college counselors; (5) study labor mobility, based on a sample survey of some 2,000 households in the Bay Area; and (6) study the impact of automation on skill requirements, based partly on information obtained in the employer survey and partly on more specialized studies related to the overall project. (SIE)

109. PROJECTION OF NASSAU-SUFFOLK EMPLOYMENT AND OCCUPATIONAL REQUIREMENTS TO 1985

(a) Albert M. Levenson and William Hamovitch. (b) In process. First part of study, Levenson, Stuart, and Landau, The Economy of Long Island, Employment and Income Trends, attempted to explain the relative economic performance of the Bi-County Area in the recent past, as compared with the 31-County metropolitan region of which it is a part. It also produced preliminary projections of Nassau-Suffolk employment to 1985. Findings of both

parts of the study to be released by the Bi-County Planning Board upon completion of study, scheduled for 1968. (c) Hofstra University, Center for Business and Urban Research, for the Bi-County Nassau-Suffolk Regional Planning Board, under sponsorship of U. S. Department of Housing and Urban Development. (d) None.

Problem. Refine earlier projections of Nassau-Suffolk employment and occupational requirements to 1985 and produce a "best" set. Based upon these projections, a projected matrix of implied occupational demands will be derived. (AML)

110. ECONOMIC IMPACT OF AREA DEVELOPMENT AGENCY PROGRAMS IN SOUTHERN GEORGIAN BAY, ONTARIO

(a) Maurice H. Yeates and Peter E. Lloyd. (b) In process. Interim reports scheduled for November, 1967, and April, 1968; final report October, 1968. (c) Queen's University, Department of Geography (Kingston, Ontario), under sponsorship of Area Development Agency, Department of Industry, Government of Canada. (d) None.

Problem. To assess the primary and secondary economic impacts of the Area Development Agency program in the Canada Manpower Centers of Midland, Collingwood, and Owen Sound.

Method. Assess the impact in terms of direct employment multipliers, changes in industrial structure, and changes in tertiary structure of the area involved. The study will determine the interrelationship between industrial development and tertiary structure in 1950 and 1960, and the degree of spatial disequilibrium created by massive generation of employment induced by the ADA program since 1965. (MHY)

111. INDUSTRIALIZATION OF NORTH KOREA, 1946-65

(a) Fong S. Lee. (b) In process. (c) State University of New York at Albany, Department of Economics. (d) None.

Problem. Investigate the industrialization process of North Korea since 1946; compare

North Korean experiences with those of communist countries of Eastern Europe.

Method. Original North Korean source materials and Japanese publications available in specialized libraries will be used. (SIE)

Agriculture

112. A NATIONAL PROGRAM OF RESEARCH FOR AGRICULTURE

(a) Joint USDA-SAES Task Force. (b) Report completed and published under above title, October, 1966. 272 pp., multilithed. Supplementary report, giving salient points, published same date. 25 pp. Agency issuing report not specified in document. (c) U. S. Department of Agriculture and Association of State Universities and Land Grant Colleges, conducted at request of U. S. Senate Subcommittee on Agricultural Appropriations. (d) None.

Problem. Study agricultural and forestry research programs in the United States; consider essential role of agriculture in our total economy and the well-being of people at home and abroad; evaluate present strengths and weaknesses in agricultural research and identify problems facing agriculture and forestry in the years ahead, the solutions to which offer great potential benefits to the public; inventory agricultural research in 1965 and recommend allocations for 1972 and 1977.

Method. A three-dimensional classification system covering purpose or kind of research activity, the commodity or resource involved, and the direction of approach (i.e., scientific disciplines involved) to the problem, was developed. An inventory of research conducted in Fiscal Year 1965 by State Agricultural Experiment Stations (SAES) and the U. S. Department of Agriculture (USDA) together with estimates of research relevant to agriculture done by other universities and federal agencies, and by industry and private research foundations was prepared. Criteria for evaluating research, and weights to be assigned to each, were determined. Views of agricultural leaders and others as to research needs were solicited. Technical review panels to assist in evaluating needs in specified areas were established.

Findings. Of an estimated \$1.2 billion spent on relevant research in FY 1965, some \$854 million were spent directly on agriculture (USDA, \$167 million; SAES, \$227 million; and industry, \$460 million). The directly related research involved some 27,000 man-years of effort by research scientists and scientist-administrators. Based on a review of research needs in 91 problem areas subsumed under nine major program goals (resource conservation and use; protection of forests, crops, and livestock; efficient production of farm and forest products; product development and quality; efficiency in the marketing system; expand export markets and assist developing countries; consumer health and well-being; raise level of living of rural people), it is estimated that 36,500 man-years of effort will be required in 1972, and 46,000 in 1977. Problems of training, recruitment, facilities, support and cost are examined in some detail, and ten specific recommendations offered for improved organization and operation of the overall program. (SK)

113. FARM MANAGEMENT RESEARCH FOR PLANNING AGRICULTURAL DEVELOPMENT

(a) Rainer Schickele. (b) Completed and reprinted, December, 1966, under the above title by the investigating agency. 16 pp. (c) Agricultural Development Council, Inc., 630 Fifth Avenue, New York, New York 10020. (d) None.

Problem. To explain why farm management work, especially in the newly developing regions of the world, should become a basic part of national planning for economic development.

Findings. Emphasis should be shifted from description to problem solving and action-oriented research. Farmers should be offered incentives to adopt modern processes and should be introduced to farm development planning and budgeting. A major effort should be directed to translating the national plan into local implementation at the grass roots level. (ML)

114. RESEARCH ON AGRICULTURAL DEVELOPMENT
IN UNDERDEVELOPED AREAS

(a) Various. (b) Continuing project. Two reports have been published to date: Research on Agricultural Development in Southeast Asia, by Clifton R. Wharton, Jr., 62 pp., 1965; and Research on Agricultural Development in North Africa, by Phillip W. Foster, 72 pp., 1967. Both available from agency. (c) The Agricultural Development Council, Inc., 630 Fifth Avenue, New York, New York 10020. (d) None.

Problem. An inventory, classification and evaluation of current and recent research on agricultural development in selected underdeveloped areas. The series is intended to serve researchers and scholars as a reference to work already done and as a guide to problems awaiting solution. (ML)

115. GETTING AGRICULTURE MOVING

(a) A. T. Mosher. (b) Completed. Copies available through Frederick A. Praeger, Inc., Publishers, 111 Fourth Avenue, New York, New York. (c) Agricultural Development Council, Inc. (d) None.

Problem. To outline and summarize the fundamental requirements for achieving agricultural development in any locality or region. The work has been prepared primarily for group study use within programs of in-service training for personnel of agencies related to agriculture in Asia, Africa, and Latin America. In addition, the work is proving to be useful for foreign technicians and high school and university teachers. (ML)

116. LOCUS OF ENTREPRENEURSHIP IN AGRICULTURE

(a) Marshall Harris. (b) Research about three-fourths completed; report in process. Publication expected, probably to be available from Government Printing Office. (c) State University of Iowa, Agricultural Law Center, under sponsorship of U. S. Department of Agriculture, Economic Research Service. (d) None.

Problem. Examine the nature and amount of loss by farm operators of entrepreneurship to off-farm businesses, and project what the situation may be in the future.

Previous Research. Harold F. Breimyer, Individual Freedom and the Economic Organization of Agriculture, University of Illinois Press, 1965; Harris and Massey, Vertical Coordination Via Contract Farming, being published soon by Government Printing Office for Economic Research Service, U. S. Department of Agriculture.

Hypotheses. Many farmers are losing important elements of entrepreneurship to off-farm business firms and government agencies; the losses are of such magnitude that they merit full-scale analysis, now.

Method. Analyze contractual relationships between farm and off-farm firms, and remotely related available literature. Conceptualize methods and methodology usable in analysis of such losses, together with appropriate hypotheses and necessary data. (MH)

117. MANAGEMENT DECISIONS IN AGRICULTURAL
USE OF PESTICIDES--A SOCIOECONOMIC
EVALUATION

(a) Max R. Langham and William Franklin Edwards. (b) In process. Publication expected. (c) University of Florida, School of Agriculture, under sponsorship of Resources for the Future, Inc. (d) None.

Problem. Study the numerous interactions of pesticides with the environment and assess costs imposed on the broader society by pesticides, gathering data on the fate of chemicals in the environment and effects on valued wildlife, fish, and, possibly, humans; define more carefully the interrelationships of the various disciplines involved and quantify and evaluate effects in a case area; combine the results of this research with improved knowledge of the effects of pesticides on agricultural productivity, now being studied, to provide a firmer basis for decisions concerning appropriate levels of pesticides usage in view of all costs and returns, private and social, than now exists.

Previous Research. J. C. Headley and J. N. Lewis, Economic Aspects of the Pesticide Problem (Baltimore: The Johns Hopkins Press,

January, 1967). (See Digest reports, 13:1-103; 14:1-69.)

Method. (1) Develop models which better define the elements of the problem and the way in which various disciplines must cooperate in order to deal with them successfully; (2) test the conceptual developments in a commercial agricultural region of Florida, probably one of the concentrated vegetable or citrus producing areas which have among the heaviest rates of pesticide application in the country and often are in close juxtaposition with fish and wildlife and recreational resources. (JS)

Manufacturing

118. INDUSTRIAL REAL ESTATE

(a) William N. Kinnard, Jr. (b) Completed and published under above title. Available from Society of Industrial Realtors, 1300 Connecticut Avenue, N. W., Washington, D. C. 615 pp. \$12.50. (c) None. (d) None.

Problem. Summary of principles and practices of interest to persons engaged in industrial development activity. Among the topics covered are importance of industry to the community; economics of industrial location; site selection process; zoning for industry; rehabilitation and conversion of industrial real estate; site development; and planned industrial districts and parks. (ED)

119. INDUSTRIAL LOCATION AS A FACTOR IN REGIONAL ECONOMIC DEVELOPMENT

(a) Not reported. (b) Completed and published under the above title. Available from the Superintendent of Documents, U. S. Government Printing Office, Washington, D. C. 20402. 119 pp. \$.60 per copy. (c) Management and Economics Research, Inc., under contract with the U. S. Department of Commerce, Economic Development Administration. (d) None.

Problem. Review the essentials of the plant location process and provide information on location trends and techniques. (JCS)

120. LOCAL IMPACTS OF RESEARCH AND RESEARCH-BASED MANUFACTURING: SANTA CLARA COUNTY, CALIFORNIA

(a) Charles L. Stewart, Jr. (b) Completed. Condensed version published March, 1967, in INFO-Commentary, by the County of Santa Clara Planning Department, 70 West Hedding Street, San Jose, California 95110. 17 pp. (c) George Washington University, under sponsorship of National Science Foundation. (d) None.

Problem. This study is part of a larger one to determine the local impacts of research and research-based manufacturing in three areas of the U. S.--Winston-Salem, North Carolina, the State of Utah, and Santa Clara County, California. The condensed report deals only with Santa Clara County, California.

Findings. The existence of a large, science-based industrial complex in the area has permanently altered the composition of its labor force, the structure of costs, and hence the balance of locational attractions which the area offers to different types of economic activity. Contrary to what is often believed, the history of the area is not the story of an agricultural economy becoming, almost overnight, a laboratory of science and industry. The change has been more gradual and had three major impetuses--Stanford University, World War II and the Korean War, and the spectacular growth of research and development in space technology, missiles, and electronics. (ML)

121. THE SPATIAL STRUCTURE OF MANUFACTURING IN THE APPALACHIAN REGION BETWEEN 1950-60

(a) Theodore E. Fuller. (b) Completed. Doctoral dissertation published by the investigator under the above title, September, 1966, Pennsylvania State University. To be published soon by the investigator, is Manufacturing in Appalachia, Trends and Prospects, AER publication, U. S. Department of Agriculture, Economic Research Service, Washington, D. C. (c) Pennsylvania State University, Agricultural Experiment Station, Department of Agricultural Economics, under sponsorship of U. S. Department of Agriculture, Economic Research Service. (d) None.

Problem. (1) Ascertain recent overall economic changes in Appalachia and the evolving role of manufacturing; (2) describe and analyze recent changes in the amount and spatial distribution of employment in major manufacturing industries; and (3) assess the impact and future implications of recent spatial changes in manufacturing industries on the industry structures of various parts of the region.

Hypothesis. A number of factors typically conceived to influence industry location were hypothesized as important in the spatial changes in major manufacturing industries among areas of Appalachia between 1950-1960. Factors tested included availability of labor, growth of area markets, diversification of manufacturing, and degree of urbanization.

Method. Appalachia was divided into 79 areas and 16 subregions. Employment changes between 1950-60 in 14 major manufacturing industries were noted for areas and subregions, as well as parameters of the hypothesized factors. Regression analysis was used to determine associations between area parameters of factors and area changes in manufacturing industries. The impact of industry employment changes on the industry structure of areas was also analyzed.

Findings. Total manufacturing employment in Appalachia expanded at nearly the national rate between 1950-60, but nationally fast-growing industries expanded less rapidly in the region than the nation and slow-growing industries more rapidly. Both "urban" and "rural" areas in the aggregate had increases in manufacturing employment over the decade, but the more "urban" areas had a larger proportion of their gains in nationally fast-growing industries oriented typically to markets while "rural" areas achieved most of their gains in slow-growth industries oriented to labor or raw materials. Factors significantly associated with differentials in rates of change in industry employment among areas included incidence of low income families in the textile and apparel industries, manufacturing diversification in the machinery industry, and rates of change in college graduates in the electrical machinery industry. (TEF)

122. SUBURBANIZATION OF MANUFACTURING IN A SMALL METROPOLITAN AREA: ROANOKE, VIRGINIA

(a) Alfred W. Stuart. (b) Completed. Published as doctoral dissertation, August, 1966, Department of Geography, Ohio State University. Available from University Microfilms and from the investigator at the Department of Geography, University of Tennessee, Knoxville, Tennessee 37916. (c) Ohio State University, Department of Geography. (d) None.

Problem. Analyze the suburbanization of manufacturing activity in the Roanoke, Virginia, SMSA to determine the relevant location factors controlling intra-urban industrial location. The study area (1960 population, 157,764) was selected as an example of small metropolitan areas to learn what, if any, significant differences exist in the process of industrial suburbanization between large and small metropolitan centers.

Hypothesis. Though the process of industrial suburbanization may be similar in any urban area, its intensity is becoming relatively greater in small metropolitan areas, contrary to the common opinion that industrial suburbanization is a big-city problem.

Method. The changing locational pattern of manufacturing activity was ascertained through the use of historical and cartographic methods. Interviews, questionnaires, and other sources were used to determine what factors were influential in the industrialist's rejection of a previous site and in his selection of an alternative. Focus was placed on plants relocated within the area and on new plants placed initially on peripheral sites.

Findings. Geographic markets, transportation, type of industry, labor conditions, power, external economies, linkages, and local government, including taxes, were found to have little influence on the intra-urban location decision. The historical timing of the decision, capital, and size of the operation were influential only in connection with availability and cost of sites. The contrast with large cities lies in the almost total lack of functional attraction that the small central city has for manufacturers. Local markets, external economies, building supply, and other factors relatively concentrated in and around the CBD were either

irrelevant or readily accessible from the suburbs. It appears that, as inertia is overcome, the present central city factories which need to expand or to reorganize their production facilities will follow the lead of new plants and choose spacious, inexpensive suburban sites. Thus, the day may come when the central city of the small metropolitan area will be virtually denuded of industrial activity. Congestion and property value differentials are less in the small city but so is the holding power of the central city. The implications for the land use pattern, tax sources, and job redistribution are profound. One alternative, to use urban renewal to develop industrial sites within the central city, is probably unsound because the heavy subsidization required would only create sites which would have no more inherent attraction for manufacturers than would existant suburban sites. More desirable would be area-wide development policies aimed at enhancing suburban industrial growth and improving centralized services more appropriate to the central city. (AWS)

Construction

123. POPULATION CHANGE AND BUILDING CYCLES

(a) Burnham O. Campbell. (b) Completed and published under the above title. Bulletin 91, Bureau of Economic and Business Research, University of Illinois. 1966. 199 pp. \$3.50 per copy, paper. (c) University of California (Los Angeles), Department of Economics. (d) None.

Problem. Investigate the demographic determinants of residential building cycles.

Method. The study develops a life-cycle model of the housing market, spelling out its analytical implications. This becomes the basis for an empirical analysis of the influence of population and of its age and family composition changes on past long swings in residential building in the United States. Finally, it projects probable effects on construction (both in total and broken down for rental and sales units) of the unprecedented changes in the demographic variables induced by World War II. The "baby boom" and its aftermath explain changes that are now occurring and that will take

place in the next 20 years. (JS)

IV. SOCIAL SERVICES

Social Planning

124. ROLE OF COMMUNITY REPRESENTATIVES IN COMMUNITY ACTION PROGRAMS

(a) Arnold Gurin and David Austin. (b) In process. Field work to continue through June, 1968. Completion and final report scheduled for December 31, 1968. Preliminary reports to be available beginning January, 1968. (c) Brandeis University, Florence Heller Graduate School for Advanced Studies in Social Welfare, Research Center, under sponsorship of Executive Office of the President, Office of Economic Opportunity. (d) None.

Problem. Provide descriptive information on the role of community representation in Community Action Programs and on the relationship of community representation to decision-making processes in these projects. While there is widespread agreement that people for whom these programs are designed should somehow be involved in them, there are differences of opinion as to how this should best be done. There has been little systematic study of this subject.

Method. A comparative study is being conducted in twenty cities in a population range of 50,000 to 900,000. The cities are located in the northeast, midwest, west, southwest, and southern border states. Information is being gathered on the formal and informal structures and processes of the community action agencies in these cities, community forces affecting the CAP's, the nature and extent of participation of representatives of target areas in CAP decision-making, and the nature of CAP programs and services. Documentary analysis, direct observation, and systematic interviews with staff, board, and citizen respondents are among the techniques being used. (AG)

125. ANALYSIS OF A POVERTY INTERVENTION ORGANIZATION AND SOCIAL CHANGE

(a) Louis A. Zurcher, Jr. (b) In process. (c) The Menninger Foundation,

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under sponsorship of Executive Office of the President, Office of Economic Opportunity. (d) None.

Problem. Conduct a social-psychological investigation of a poverty intervention organization (OEO), as it has been and as it is working within a community. What, for example, are the internal and external stresses and strains experienced by the intervention organization as it attempts to bring together toward a goal of poverty amelioration, presently disparate and resistant socioeconomic components of a community?

Since establishing Target Neighborhoods and Target Neighborhood Committees is part of the poverty intervention organization's strategy for involving the poor, this search also focuses upon the characteristics of such involvement, and upon the group dynamics of the Target Neighborhood Committees, themselves. What, for example, are the stages of and incentives or deterrents to group development, indigent leadership, and socialization?

Method. The data are to be gathered by participant observation and unstructured interview techniques. (SIE)

126. WEST SIDE URBAN RENEWAL PROJECT

(a) George K. Wyman. (b) In process. (c) State of New York, Department of Social Welfare, in cooperation with Greenleigh Associates, Inc., and the Department of Public Welfare, New York City, under sponsorship of U. S. Department of Health, Education, and Welfare, Welfare Administration, Bureau of Family Services. (d) None.

Problem. A large-scale community project of helping residents of the West Side Urban Renewal program in New York City, to determine the feasibility of extending statewide social services to potential as well as actual recipients of public welfare. It represents one of the few efforts of public welfare to demonstrate the value of extending services on a neighborhood basis rather than relating them only to public assistance eligibility.

Method. Provide intensive casework services through three special family counseling units set up for all residents, irrespective of their eligibility for public assistance,

in this West Side area. The effort is made to help residents cope more effectively with the problems of relocation and to prepare them for acceptable living standards in the renewal neighborhood. Residents who fail to qualify for public housing due to inadequate housekeeping standards are given special help through home management assistance. Special grants can be made to cover special needs related to relocation, such as moving costs, new household furnishing and replacements, and clothing. (SIE)

127. METROPOLITAN CRITICAL AREAS PROJECT

(a) Helen Rowe. (b) Completed. Report to be submitted by January, 1968, to Children's Bureau, The Social and Rehabilitation Service, U. S. Department of Health, Education, and Welfare. (c) Camp Fire Girls, Inc. (d) None.

Problem. An intensive action-research program to study new ways of organizing and developing programs and volunteer leadership which can make significant contributions to the social development of girls, age seven through high school, living in metropolitan critical areas.

Method. The project is being conducted in Boston, Detroit, and Washington, D. C. It draws on the resources and skills of university social science research centers, schools of social work, Camp Fire Girls organizations, and other interested national and local groups. It is designed for maximum use of university-linked resources; maximum freedom to create and test program innovations at local levels; identification of current innovative practices in the Camp Fire Girls and other agencies serving girls; and maximum diffusion of all findings to interested groups and individuals. (HR)

128. INFORMATION SOURCES FOR COMMUNITY PLANNING

(a) Leah S. Aronoff. (b) Completed and published as Current Information Sources for Community Planning: Periodicals and Serials. Council of Planning Librarians Exchange Bibliography No. 35. Mary A. Vance, editor. November, 1967. 55 pp. \$3.00. Available from Mrs. Vance at P. O. Box 229, Monticello, Illinois 61856.

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Problem. A bibliography of information sources. Contains 257 unannotated references. The orientation is interdisciplinary, and there is a great diversity in titles, but each entry has been evaluated in terms of its relevance to community planning. (ML)

Housing

129. URBAN HOUSING MARKET ANALYSIS

(a) Richard W. Lippold. (b) Completed and published under the above title. Single copies available without charge from Consumer Relations, Department of Housing and Urban Development, Room 1129, Shoreham Building, Washington, D. C. 20410. Identified as HUD-TS-2, the publication may be purchased in quantity from the Superintendent of Documents, U. S. Government Printing Office, Washington, D. C. 20402. 100 pp. \$.50 per copy. (c) U. S. Department of Housing and Urban Development, Office of Economic and Market Analysis. (d) None.

Problem. The publication is a housing market analysis guidebook containing a detailed outline of procedures to be followed in conducting a local housing market analysis using census data and other readily available statistics. Based on techniques developed by the Federal Housing Administration, the manual is designed for local redevelopment agencies, planning organizations, local housing authorities, residential research committees, and other local groups who want to carry out studies to determine the need and effective demand for new housing in their communities over a given period. (JS)

130. THE ECONOMICS OF PUBLIC HOUSING RECONSIDERED

(a) Eugene Smolensky. (b) Completed and reported under the above title. Publication includes Appendix A, "A More Formal Statement of the Problem," Appendix B, "Techniques and Data Sources for the Subsidy Estimate," Appendix C, "The Prisoner's Dilemma and Neighborhood Supply Elasticities," and Appendix D, "An Annotated Bibliography of Selected Materials." A limited number of copies available

from the Center for Urban Studies, University of Chicago. Article from study to appear in Journal of Institute of Planners, January, 1968. (c) University of Chicago, Center for Urban Studies, under sponsorship of Office of Economic Opportunity. (d) None.

Problem. Determine whether direct cash subsidies to the poor would achieve the social objectives of programs now providing housing directly to the poor. (CAS)

131. THE PHILADELPHIA HOUSING DEVELOPMENT CORPORATION: PROSPECTS AND POSSIBILITIES FOR A NON-PROFIT HOUSING CORPORATION

(a) Cushing N. Dolbeare. (b) Completed and published. Copies available from Philadelphia Housing Association, 1601 Walnut Street, Philadelphia, Pennsylvania 19103. December, 1966. 36 pp. \$1.00 per copy. (c) The Finance Committee of the Philadelphia Housing Association. (d) None.

Problem. An examination of the potential areas of activity for a non-profit housing corporation--in this instance, the quasi-public Philadelphia Housing Development Corporation. An examination of the most critical housing problems facing urban areas today, including discrimination and segregation in housing and the economic viability of proposed programs.

Findings. Through a variety of urban housing programs, the most critical problems can be dealt with and possibly overcome. Some of the methods proposed are acquisition and rehabilitation of low cost housing, guarantee mortgages, making repairs on homes owned by recalcitrant landlords, aid to low income home owners and advancing funds and services to other non-profit groups concerned with improving urban housing. (ML)

132. HOUSING AS INVESTMENT IN ENVIRONMENTAL HEALTH

(a) Khing B. Tjioe, Leland S. Burns, Frank G. Mittelbach, and Leo Grebler. (b) In process. (c) University of California (Los Angeles), Graduate School of Business Administration,

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Real Estate Research Program, under sponsorship of U. S. Department of Health, Education, and Welfare. (d) None.

Problem. Articulate an economic framework for considering the position of investment in housing programs as a tool for raising the level of living. Housing will be analyzed in the context of community development and environmental health programs aimed at welfare improvement. It is contemplated that the project will: (1) provide operational guidelines to assist public agencies and private developers in formulating housing programs within the context of community development; (2) strengthen the position of housing as an alternative in investment planning by estimating socioeconomic benefits in the same terms as costs; (3) answer questions dealing with the optimum distribution of housing in several dimensions; and (4) encourage subsequent research on housing as an economic investment rather than one predicated solely in terms of social need criteria.

Method. Investigate, at a series of test sites located in the U. S., the relation between qualitatively improved housing and productivity, health, and educational performance. Experience gained in completing similar studies abroad will provide useful inputs to the study. (SIE)

133. PROPOSED HOUSING ELEMENT FOR A REGIONAL PLANNING STUDY DESIGN

(a) Lawrence Cameron. (b) Completed and published April, 1967, under the above title. Available from Philadelphia Housing Association, 1601 Walnut Street, Philadelphia, Pennsylvania 19103. \$.50 per copy. (c) Philadelphia Housing Association, Committee on Regional Housing Development. (d) None.

Problem. The report is a recommended housing element for inclusion in a comprehensive planning design for the Delaware Valley Region. The area is identified with Philadelphia, and major activities centering on Philadelphia extend to Bucks, Chester, Delaware, and Montgomery Counties in Pennsylvania, and to Burlington, Camden, and Gloucester Counties in New Jersey. To some extent, Mercer County in New Jersey and New Castle County in Delaware are also a part

of this region.

Hypothesis. Housing is the keystone of the quality of life in the region, and the entire region has a collective responsibility to house adequately all persons without respect to political boundaries. Many problems affecting housing are regional in nature and solutions must be regional in scope. Decisions involving considerations of importance to housing should result directly from policies about housing, not residually from assumptions and policies arising from other areas, such as highways or water works plans. (JS)

134. APPALACHIAN HOUSING STUDY

(a) James Twoomey, Hortense Gobel, Seymour Baskin, and Albert Cole. (b) In process. (c) Urban America, Inc., under sponsorship of Appalachian Regional Commission. (d) None.

Problem. To investigate how West Virginia and eastern Kentucky can increase the supply and availability of good housing for low and moderate income families. At present, about 60 percent of the families in these two areas live in substandard homes. The study will investigate ways in which private enterprise can be encouraged to finance and construct low income family housing, and how a whole range of necessary urban services can be coordinated with housing developments.

Method. Work with local and state leaders in banking, real estate, construction and other related fields. (SK)

135. TRENDS IN HOUSE DESIGN

(a) Eric Carlson. (b) In process. The contemplated form of presentation of documents to be produced will permit their use not only by technical personnel, but also by administrators, policy makers, and industrialists, in order to more easily implement the design principles that will be formulated. A bibliography to be available in early 1968. A comprehensive report not expected before 1969. (c) United Nations Centre for Housing, Building and Planning, in collaboration with various regional economic commissions and international professional organi-

zations. (d) None.

Problem. To formulate design principles which, within given climatic, cultural, social, and economic conditions, may produce acceptable housing and community facilities, to be built and maintained at a cost within the paying capacity of low income families in developing countries.

Method. Currently: (1) the International Union of Architects through its Housing Section located in Bucharest, has offered to carry out the first phase of the project, an evaluation of certain existing housing projects; (2) the Architectural Association of London, through its Department of Tropical Studies, is preparing a report on relationship of climate to design; (3) the Library of the Graduate School of Design, Harvard University, has prepared a bibliography on the subject; and (4) the Czechoslovakian Research Institute for Building and Architecture has offered to prepare a report on methodology for government decisions on design questions. (EC)

136. USE OF COMPUTERS IN DESIGN OF HOUSING

(a) Arthur R. Cogswell and others.
(b) In process. (c) North Carolina Fund, under sponsorship of U. S. Department of Housing and Urban Development. (d) None.

Problem. An experiment using computers to help cut costs in the design and production of low-cost, multi-unit housing. Known as IBIS (Integrated Building Industry System), this computer-based design instrument will give designers of low-cost housing an instant indication of what it will cost to build their design. Now in an early stage, IBIS is dealing mainly with costs. Other factors, however, could be introduced, such as ease of maintenance or speed of construction. Eventually, the system could be used for an early analysis of the feasibility of a low-income housing project or to explore the effects upon total costs of different potential project sites. Under the new system, the architect draws up a design. It is fed into the computer which is able to accept three-dimensional geometric designs. The computer then supplies several types of information. By introducing changes in the original concept, the architect can explore the design, coming up with a number of variations.

Method. The most difficult part of drawing up the new system is developing procedures to introduce the thousands of bits of information needed into the computer. The investigators are now working to refine and simplify methods of communicating with the computer. To test the system, the group will pit IBIS against conventional designing aids by using an existing low-income, multi-family building. The original architect will redesign the building using the IBIS system. To reflect possible increases in building costs since the building was constructed, the original design will be run through the computer to update costs to the present day level. The two designs will then be compared to see if the new design can be produced at a lower cost. (SIE)

137. PUBLIC HOUSING AS A REHOUSING RESOURCE FOR URBAN RENEWAL DISPLACEDS

(a) Marilyn Langford. (b) In process.
(c) Cornell University, Agricultural Experiment Station, under sponsorship of the State of New York. (d) None.

Problem. Determine the degree to which public housing serves as a rehousing resource for low income, urban renewal displaceds.

Method. Data from records of the Near East Side Urban Renewal Project in Syracuse, New York, and from the Syracuse Housing Authority will be analyzed to identify the characteristics of families associated with the move to public housing, and to identify those social and economic factors limiting the use of public housing to certain segments of the low income population. (SIE)

138. SUBSIDIZED HOUSING AND THE ADJUSTMENT OF OLDER WOMEN

(a) Harold Mackey. (b) Completed May 31, 1967, and report submitted to sponsoring agency. Article prepared and submitted for publication. (c) Oregon College of Education, Pacific Lutheran University, in cooperation with the Tacoma Housing Authority and State of Washington, Office of Aging, under sponsorship of U. S. Department of Health, Education, and Welfare, Office of Aging. (d) None.

Problem. To determine if fully subsidized housing would improve the personal adjustment of older women after they had lived there for at least nine months.

Previous Research. Research by Cavan, et. al. provided a Personal Adjustment Score (and instrument for obtaining the same); research by Carp in Texas indicated that public housing did improve the personal adjustment.

Hypothesis. Nine month's residence in subsidized housing would improve the Personal Adjustment Score significantly; for a control group the adjustment would remain stable or decline.

Method. Of 65 older women selected to occupy subsidized housing units, 23 indicated willingness to be interviewed and were interviewed in March-April, 1966, before moving into the housing, using (with minor revisions) the Cavan schedule. From a control group of 50, matched by age and income, 16 indicated willingness to be interviewed and were interviewed the summer of 1966. After the units had been occupied nine months, 64 ladies were interviewed including 16 in the original sample. Of the control group, it was possible to locate and reinterview only ten of the original 16.

Findings. The statistical measures of personal adjustment did not support the hypothesis of the study, did not show significant improvement of adjustment. However, comments both by the residents and the interviewer indicated a large improvement in adjustment. While the small sample may have been a factor in the inconclusive results achieved, the possibility remains that the Cavan Personal Adjustment Scale may not be an adequate measure of adjustment of older people. A request to replicate the study elsewhere has been submitted. (HM)

139. USE OF FILMS IN HOUSING CODE
ENFORCEMENT

(a) Not reported. (b) In process. For information, contact H. B. Masters, Director, Georgia Center for Continuing Education, University of Georgia, Athens, Georgia 30601. (c) University of Georgia, Center for Continuing Education and the Institute of Community and Area Development, under sponsorship of U. S. Department of Housing and Urban Development. (d) None.

Problem. Develop and test the use of films and television in explaining housing codes to the general public and in training housing code officials.

Method. Develop motion picture films, video tapes, and other training aids, and arrange for showing of the films and telecasting of the films and tapes in selected communities; analyze the results of the education and training programs, and prepare a report of results of project for the guidance of other states.

Education

140. STATEWIDE PLANNING IN HIGHER EDUCATION: ITS IMPLICATIONS AT THE LOCAL LEVEL

(a) Ernest G. Palola and Timothy Lehmann. (b) In process. (c) University of California (Berkeley), under sponsorship of U. S. Department of Health, Education, and Welfare, Office of Education, Research and Development Center Program, Center for Research and Development in Higher Education. (d) None.

Problem. Determine the consequences of statewide planning for individual institutions, and how these consequences vary by the type of institution; the relationship between the nature and process of planning on the one hand and the consequences for individual institutions on the other. Studies include changes in the decision-making power and autonomy, modifications to key administrative roles, institutional planning, and shifts in institutional function and character.

Method. Interviews and questionnaires are being used to collect data from state officials, legislators, coordinators, institutional administrators, and faculty. Three different sets of states, varying in their respective experience with state-wide planning, are being studied. The total number of states is ten and the average number of institutions studied per state, eleven, spanning major universities through community colleges, both public and private. Both initial and follow-up observations are being made in each of the states with a two-year time lapse between observations. Intensive interviewing will be done on a selective

basis within each state and questionnaires soliciting similar information be given to a broader sample of institutions. (EGP)

141. THE EQUALIZING IMPACT OF STATE AID TO EDUCATION

(a) David Barkin. (b) Completed and published, June, 1967, under the above title as Working Paper EDA 3. Available from Washington University, Institute for Urban and Regional Studies. The study is part of a continuing project for study of the way in which intergovernmental grants are distributed. Subsequent reports will deal with federal aid to disadvantaged children and the need for reorganization of school systems in metropolitan areas. (c) Washington University, Institute for Urban and Regional Studies, under sponsorship of U. S. Department of Commerce, Economic Development Administration, and the Central Midwestern Regional Educational Laboratory, Incorporated. (d) For reports on other EDA projects, see 13:1-202; 14:1-173.

Problem. Compare state aid programs in Kentucky, Missouri, and Tennessee to determine how well they compensate for differences in the ability of local school districts to pay for education. The wide range of ability of communities within a state to finance educational costs out of local tax receipts is directly linked to the problem of the level of expenditure for education because of the tradition of local autonomy in education.

Method. The basis for evaluating the equalization effects of the programs under scrutiny in this study is the degree to which state aid is concentrated in those school districts which have the least ability to support education. The most efficient system, from this point of view, would be one which provided no assistance to the very wealthy communities in favor of directing the limited funds that are available to those less able to finance an adequate educational program.

Findings. Of the three state programs, Kentucky does a better job of distributing funds to equalize for differences in ability to pay than does either Tennessee or Missouri, basically because of the proportion of the educational program which must be financed

locally and the share of state aid distributed without regard to economic ability. It was also found that state aid discriminates against urban areas in all three states, partly because of the greater reluctance of areas experiencing outmigration to finance the education of students who will not contribute to the community. The urban areas were able to compensate by raising funds from local tax sources and, consequently, had more money available per student than equally wealthy rural communities. An alternative aid formula, developed and used as a standard against which to measure the present equalization scheme, is described in the report. It presents a hypothetical solution which might be considered in state aid programs. It is the simplest formulation of a program which has many variations: it would, for example, be possible to take into consideration the additional costs of urban and/or secondary education; required effective tax levies might be flexible and vary inversely with the ability of the school district to support education; and provision might be made for flat grants and aid for specific programs in addition to, or as part of, the basic equalization programs. (DB)

142. INPUT AND OUTPUT IN LARGE-CITY HIGH SCHOOLS

(a) Jesse V. Burkhead, Thomas G. Fox, and John W. Holland. (b) Completed and published in 1967, under the above title by Syracuse University Press, Syracuse, New York. 105 pp. \$2.95 per copy. (c) Syracuse University, under sponsorship of Carnegie Corporation of New York. (d) None.

Problem. Analyze resource allocation within the public school systems of five cities--Atlanta, Boston, Chicago, New York, and San Francisco. Trace relationships between allocational levels and patterns, and the resulting outputs of schools.

Findings. Variations in educational outcomes in large-city high schools, measured in terms of test scores, are almost wholly conditioned by the socioeconomic environment of the neighborhood. The income class of the neighborhood, housing conditions, occupation of parents, and ethnic status are the important determinants of variations in education outcomes. In large cities for a very great number of low income children, perhaps an

increasing number, there is no reasonable expectation for an important improvement in the quality of education unless something dramatic is done to ameliorate the socioeconomic conditions of existence. (JFZ)

143. SCHOOL DESEGREGATION IN BALTIMORE

(a) Dollie Walker, Arthur L. Stinchcombe, and Mary S. McDill. (b) Completed and published August, 1967, under the above title. 47 pp. (c) Johns Hopkins University, Center for the Study of Social Organization of Schools, under sponsorship of U. S. Department of Health, Education, and Welfare. (d) None.

Problem. (1) To describe the effect of legal and administrative policies aimed at eliminating desegregation in the Baltimore City School System, since the Supreme Court desegregation decision; (2) insofar as these effects fall short of the ideals set forth by the law and taken as an aim by the school administration, investigate the causes of the failure.

Findings. (1) Both the Baltimore City and County Systems have made some progress toward desegregation within their systems, but both systems taken together and considered as a single metropolitan system have made no progress at all. While segregation within the political boundaries has declined in importance, the City-County boundary has become the most important segregating influence in the metropolitan area. Unless integration can take place across the City-suburban boundary, neither school system by itself can appreciably affect the amount of segregation. (2) Second in importance is private and parochial school segregation. Almost all students in private schools are white. Efforts within the public system have little effect, because a very large part of the whites are in private and parochial schools, not subject to public policy. (3) The only progress made involves introducing Negroes into previously segregated white schools, none involves introducing whites into Negro schools. (4) The only kind of desegregation the policy has been able to effect has been almost exactly equalled in recent years by a compensating number of schools becoming segregated. (5) All these forces operate more strongly on elementary schools than secondary ones. (6) The fundamental explanation for school segregation is neighborhood segregation.

(7) The fundamental source of neighborhood segregation is differential net migration. When a Negro moves out of a desegregated neighborhood, he tends to be replaced by a Negro. When a white moves out of a desegregated neighborhood, he tends to be replaced by a Negro. The net migration of whites into the metropolitan area takes place almost entirely into the suburbs, that of Negroes almost entirely into the City.

The policy implications of these findings are: (1) Energy directed at increasing desegregation of the City System cannot have large effects. (2) Within the school system of the metropolitan area as a whole, there are two possible solutions. The first is elimination of the City-County boundaries as the major segregating force in the system either by opening up housing in the suburbs, but keeping the school systems separate, or by integrating the County and City systems. The latter would be feasible only by constructing large educational parks near the City boundaries, and bussing City children out to them and suburban children in. The private and parochial systems' segregating effect on Negroes is just about equal to that of the City-suburban boundary. Integration of private systems should be a major factor in any effective desegregation policy. (3) There are some policies that might affect somewhat the pattern of net migration, which could be carried out by the school system, itself. The basic problem is to break into the realtor-client communication system. The school system might engage in a program to introduce true information on the quality of integrated schools into the realtor-client system. For example, they might encourage realtors to bring clients to schools for visits, provide information on the quality of the school (the proportion of students going on to college preparatory work is probably the measure of most interest to parents), and by printing an attractive brochure on "Baltimore's Integrated Schools." (ALS)

144. DESEGREGATION ANALYSIS PACKAGE

(a) Arthur L. Stinchcombe, Dollie Walker, and Mary McDill. (b) Completed. Report issued October, 1967. The program was developed in conjunction with Desegregation in Baltimore, described in Item 143 above. (d) Johns Hopkins University, Center for Study of Social Organization of Schools, under sponsorship of U. S. Department

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of Health, Education, and Welfare, Office of Education, Cooperative Research Program, Research and Development Center Programs. (d) None.

Problem. Develop an "analysis package" to assess progress in school desegregation using school system data, which would be an approach that could be used in analyzing any school system.

Method. The data for this project was from the Baltimore City and Baltimore County School Systems.

Findings. The "analysis package" consists of a Fortran IV program written for an IBM 7094 computer to make the relevant computations and print them out along with brief descriptions of their meaning. (ALS)

145. ECONOMIC ANALYSIS OF "EQUALITY OF EDUCATIONAL OPPORTUNITY"

(a) John D. Owen. (b) In process. (c) Johns Hopkins University, Center for the Study of Social Organization of Schools, under sponsorship of U. S. Department of Health, Education, and Welfare, Office of Education, Cooperative Research Program, Research and Development Center Programs. (d) None.

Problem. An economic analysis of the causes of the disparity between objective and reality in achieving equality of education in the United States. The four categories of obstacles to equal opportunity are: (1) those arising out of variation in economic level from school district to school district; (2) the availability of private schools which enable the parent of above-average means to send his child to a school where resources per student are much higher than in the public schools of his district; (3) inequalities in resources per student within school districts; and (4) variation in the composition of the educational dollar allocated to children of different groups.

Method. Factors to be considered include the effects of conscious attempts to desegregate the schools; movements of the middle classes out of the city; and the changing of neighborhoods from white to Negro, or from middle to lower class. Unpublished empirical data to be utilized include the material collected for the Office of Educa-

tion study, Equality of Educational Opportunity, U. S. Department of Health, Education, and Welfare, Office of Education. (JDO)

146. EDUCATION AND INTERGROUP RELATIONS PROBLEMS OF ETHNIC AND RACIAL MINORITY STUDENTS

(a) Clarence Senior and William S. Bernard. (b) An analytical and annotated compendium of some 500 titles of biographies and autobiographies of immigrants to the U. S. has been compiled. Preparation of summaries of contents and cross referencing with major systems of human relations instruction, followed by similar compilation, analysis, and cross references of relevant educational material, records, and accounts, in process. Publication of findings to date planned within a year. (c) The City University of New York, The Center for Migration Studies of Brooklyn College. (d) None.

Problem. To discover the nature, problems, and patterns of resolution of tensions in intergroup relations education of ethnic and racial minority students in the American school system; to find out where intergroup relations as consciously or unconsciously taught have been effective or not and why; to ascertain the transferability of theories and practices from one minority group to another.

Hypotheses. Conscious or unconscious, formal or informal instruction in intergroup relations has a measurable effect on the behavior and attitudes of racial and ethnic minority students. In order to initiate valid new experiments or approaches, all existing data must first be collected and analyzed. From this will emerge guidelines for the future.

Method. Collection, interpretation, comparison and correlation of existing data from records, histories, commentaries, and analyses of educators or former students.

Findings. There appears to be much more relevant material than might have been thought, both in public and private repositories and collections. If project's scope can be carried out sufficiently, contributions to both fundamental and applied fields should ensue. (WSB)

147. EFFECTS OF COMMUNITY CONTEXT ON EDUCATION ASPIRATIONS AND ACHIEVEMENT BY RACE, ETHNIC, AND SOCIOECONOMIC CHARACTERISTICS

(a) C. Wayne Gordon, Robert Wenkert, and Audry J. Schwartz. (b) In process. (c) University of California (Los Angeles), Department of Education, under sponsorship of U. S. Department of Health, Education, and Welfare, Office of Education, Cooperative Research Program, Research and Development Center Programs. (d) None.

Problem. Examine the effects of community social context on the aspirations, values, achievement, and voluntary association affiliation of elementary, junior high, and high school students.

Method. Using a purposive sampling of schools from a large metropolitan system, in which density and socioeconomic level of Anglo and Mexican-American populations are considered, examine varied relationships to a number of dependent variables (achievement, aspiration, and values). The sample includes 4,500 pupils from the sixth, ninth, and twelfth grades. (CWG)

148. TEACHER EDUCATION AND PARENT-TEACHER AIDES IN A CULTURALLY DIFFERENT COMMUNITY

(a) Jerome H. Gilbert, Neil V. Sullivan, and Joseph D. Lohman. (b) In process. (c) Berkeley Unified School District, in cooperation with University of California (Berkeley), School of Criminology, under sponsorship of Executive Office of the President, Office of Economic Opportunity. (d) None.

Problem. Develop a model for training disadvantaged parents to be parent-teacher aides in the school. The aid's role would be that of a liaison worker, who is also a parent, between the school and the members of a disadvantaged community to help bring other parents in the community and teachers into a working relationship within the school. Hopefully, this will modify positively the behavior of pupils, parents, and teachers. The aide who comes from a poor background, himself, should be able to help teachers and parents develop mutually satisfying ways of dealing with children;

help to increase the understanding of the school faculty towards the life-style, concerns, child rearing patterns, and language of the surrounding disadvantaged community. (SIE)

149. LONGITUDINAL STUDY OF NEWLY FORMED CENTRALIZED RURAL SCHOOL DISTRICTS

(a) Burton Kreitlow. (b) In process. (c) University of Wisconsin, Agricultural Experiment Station, under sponsorship of State of Wisconsin. (d) None.

Problem. Determine: (1) whether or not school district reorganization is worthwhile in terms of time, effort, and expenditure of funds; (2) the effects of such school district reorganization on the educational results of the school; (3) the characteristic differences between 4-H Club members and nonmembers and the effectiveness of the 4-H Club program in achieving stated objectives.

Method. The investigation began in 1949 with a group of first grade boys and girls in ten Wisconsin communities. They are the subject of investigation into their twenties. A replication study was begun in 1954 and will continue for the same period of time. The communities initially chosen were selected on the basis of the type of school district organization in the community. Five reorganized school districts are being compared with five nonreorganized school districts; those who join and remain in 4-H Clubs for a number of years are compared with those who join and drop out early and with those who never join. (BK)

150. PATTERNS OF EXPENDITURES FOR RURAL PUBLIC EDUCATION

(a) Harold C. Grinnell. (b) In process. (c) University of New Hampshire, Department of Agricultural Economics, Agricultural Experimental Station, under sponsorship of State of New Hampshire. (d) None.

Problem. To determine the existence, or nonexistence, of definite patterns of expenditures for support of public education in rural New Hampshire.

Method. Statistical material prepared and distributed by the State Department of Education will be used as a basis for determining the existence or nonexistence of patterns (economies of scale) of school expenditures among rural school districts, those having a population of 2,500 or less. The material will be supplemented with the U. S. Census and the Town Property Survey Report of the State Planning and Development Commission in 1957. Social and economic variations among districts will be established as independent variables. Models will be formulated to assess the manner in which these independent variables affect school costs. (HCG)

Health

151. ENVIRONMENTAL HEALTH PLANNING GUIDE

(a) Jerome H. Svore. (b) Completed. Pre-publication copy issued September, 1967. 100 pp. Available from Office of Urban Environmental Health Planning, 6935 Wisconsin Avenue, Chevy Chase, Maryland 20015. (c) National Center for Urban and Industrial Health, Cincinnati, Ohio under sponsorship of U. S. Department of Health, Education, and Welfare, Public Health Service. Office of Urban Environmental Health Planning. (d) None.

Problem. To prepare a guide that will be useful in the preparation of the environmental health plan as a part of the comprehensive health plans which would include physical, mental and environmental factors. To identify for states and communities the factors which contribute to a healthful environment, the steps needed to achieve and maintain a positively healthful environment and the resources and timing required to carry out the necessary steps.

Method. The first revised edition of the Guide was based upon experience with diverse groups in 35 urban areas, including metropolitan areas. The current edition is only a partial revision of the previous edition, but instead of being a generalized survey manual, it has become a more technical tool for environmental health planning staffs serving the State and area-wide comprehensive health planning agencies. (ML)

152. THE PROCESS OF PLANNING FOR AREA-WIDE HEALTH SERVICES

(a) Douglas R. Brown. (b) In process. (c) Cornell University, Sloan Institute of Hospital Administration, under sponsorship of U. S. Department of Health, Education, and Welfare, Public Health Service. (d) None.

Problem. An exploratory study designed to gain further information about area-wide planning for health services--in particular, how such planning operates in actual practice.

Method. Examine role of the planning agency and analyze human dimensions of the planning process, including policy and decision-making considerations, strategies employed in the process, and perceptions of the planning role held by those involved in the activity. The study is directed toward the dynamic aspects of the planning operation and not elaboration of technical procedures. (SIE)

153. HEALTH SERVICES SYSTEM SIMULATION

(a) Robert A. Shapiro. (b) In process. (c) University of Oklahoma, Department of Industrial Engineering, under sponsorship of U. S. Department of Health, Education, and Welfare, Public Health Service. (d) None.

Problem. Define the specific scope of a simulated total health services system to encompass the interdependency of the health and social welfare activities in an open system. Population expansion of the United States, together with increasing proportional demands for medical and social welfare services in an expanding economic environment, will place a severe strain on current and planned hospital health and social welfare facilities across the nation. These demands cannot be met without a careful planning and development program which utilizes scientific methodology both in projecting future needs and in providing for an economic distribution of health services.

Method. The methodology encompasses a systems engineering approach to simulate an open environment, using the techniques of service theory, inventory control theory, replacement theory, input-output emphasis, and general nonlinear growth models. (SIE)

154. FEASIBILITY STUDY OF CENTRALIZING
HEALTH PLANNING INFORMATION

(a) Emmett W. Arnold, Erwin C. Pohlman, and Velma Hinchliffe. (b) In process. (c) State of Ohio, Department of Health, under sponsorship of U. S. Department of Health, Education, and Welfare, Public Health Service. (d) None.

Problem. Review existing sources of health planning information and the present systems of collection, analysis, and use of such data and determine to what extent they should and can be centralized with a minimum of effort, expense, and duplication. (EWA)

155. COMMUNITY POWER, HEALTH POLICY, AND
ADMINISTRATION

(a) Harry W. Reynolds, Jr. and Cora Martin. (b) In process. (c) Municipal University of Omaha, Department of Political Science, under sponsorship of U. S. Department of Health, Education, and Welfare, Public Health Service. (d) None.

Problem. Ascertain the particular role and relative importance of the governmental administrator (particularly the public health administrator), lay and professional, in the formulation and execution of public health policy in one metropolitan area (Omaha-Council Bluffs). More particularly, to consider the role of the governmental health officer as a participant in the community power structure of this area, adjudging his role in relation to other components of that power structure.

Method. Situational and attributed methods of analysis and pinpointing are being utilized to ascertain who comprises the power structure. Data is being gathered through interviews, public records such as legislative histories of bills dealing with health matters, and other sources, e.g., newspapers, minutes of meetings of boards of health. (HWR)

156. PATTERNS OF COMMUNITY HEALTH SERVICES

(a) Wilson D. Steen and Lloyd G. Hill. (b) Completion expected February 1, 1968. Findings to be issued as a re-

port after that date and available from Bureau of Public Health Research, University of Oklahoma Medical Center. (c) University of Oklahoma, Medical Center, Bureau of Public Health Research, under sponsorship of U. S. Department of Health, Education, and Welfare. (d) 13:2-123.

Problem. An exploratory study to formulate new approaches to the organization of Community Health Services. The geographic area of particular concern is the area generally described as the Great Plains and those regions adjacent thereto.

Method. (1) Collect information on state and local health service organizations in a ten-state area (Great Plains) and collect social, cultural, and economic data on the Great Plains as background data; (2) study four communities in Oklahoma that represent the four basic socioeconomic areas of the State, for correlations between population (size), availability of health personnel, and types of health services available; (3) study the organizational pattern for a specific health program (accident prevention was chosen as a noncontroversial subject) carried out in an urban center to test the inter-relationships that exist between agencies in the community; (4) formulate and test a community health survey schedule; (5) conduct other small sample studies related to health services for migrant labor, rehabilitation, and community guidance centers. (JR)

157. HEALTH SERVICES AND THEIR USE IN
UPSTATE NEW YORK

(a) B. L. Ellenbogen. (b) In process. (c) Cornell University, Agricultural Experiment Station, under sponsorship of State of New York. (d) None.

Problem. Inventory, study, and analyze available health services and their use by urban and rural populations in upstate New York.

Method. Inventory health resources in six upstate New York counties and compare findings with those from a 1949-51 survey; study use made by rural people and use made by urban populations of available medical and health services and facilities; compare present and 1949-51 uses made by rural populations; compare rural and urban use patterns; interpret changes and stabilities in inventory and use

of resources in relation to demographic, technological, and social changes; and develop measure of change in health services and facilities for a county. Data are being analyzed for the pairs of counties based on their geographical position and position on a health resource index. (BLE)

158. SYSTEMS ANALYSIS FOR MENTAL HEALTH SERVICES IN CENTRAL ILLINOIS

(a) William Eicker. (b) In process. Work completed on compiling health and welfare agency data for several counties, preparatory to computer simulation and hypotheses testing. Project work described in The Application of Systems Technology to Community Mental Health, available from the Adolf Meyer Center, Department of Mental Health, Mound Road, Decatur, Illinois 62526. 85 pp. \$6.00 per copy. (c) Adolf Meyer Center, Department of Mental Health. (d) None.

Problem. Application of systems technology to the administration and evaluation of a community mental health program.

Method. Mental illness is treated as life impairment whose etiology resides predominantly in the sociocultural environment of population subgroups, and in the availability and delivery of services. Mental health is conceptualized as a health and welfare social system, and the existing state and county health and welfare agencies are subjected to a systems analysis. Heuristic modeling by mathematical and computer simulation language programs is completed for the health and welfare network in given communities. Perturbation analyses are performed with simultaneous parametric values to test hypotheses on improved methods of service and dollar value. Systems design studies are completed and simulated for developing meaningful and feasible hypotheses. Project significance is seen in demonstrating the capability of applying systems and computer science for more effective program planning, delivery of services, and community organization activities. (WFE)

159. PLANNING FOR COMMUNITY HEALTH CENTERS

(a) Todd M. Frazier, Dean A. Hungerford, William R. Fox, Kinzo Yamamoto, Conrad H. Foerter, Dorothy Youtz, Alson Shields Lydia Aston, Florence Hicks, and Lee W. Schwenn. (b) In process. (c) District of Columbia, Department of Public Health under sponsorship of U. S. Department of Health, Education, and Welfare, Public Health Service. (d) None.

Problem. (1) Develop a plan for establishment of community health centers and their satellites to provide a broad range of public health services, with focus on the initial center to be established; (2) complement present planning in areas of mental health and mental retardation with similar planning for traditional and newly emerging health services and interrelate these planning efforts; (3) identify ways in which private practitioners and other members of the medical community can participate most effectively in the community health center programs.

Method. Collect and analyze data relative to: (1) demographic characteristics of the population; (2) health status of the population; (3) quantity and availability of health manpower and health facilities; (4) utilization of health resources; (5) adequacy and suitability of existing and proposed health resources. Indication of expressed needs of the community will be obtained through the Public Health Advisory Council to the District Department of Public Health. (TMF)

160. AN INFORMATION SYSTEM FOR COMMUNITY HEALTH SERVICES

(a) Vergil N. Slee, Otto K. Engelke, and William H. Kincaid. (b) Project is midway through fourth and final year. Report to be submitted to U. S. Public Health Service by July, 1968. (c) Commission on Professional and Hospital Activities and Washtenaw County Health Department (Michigan), under sponsorship of U. S. Department of Health, Education, and Welfare, Public Health Service. (d) 13:2-35.

Problem. Develop a computerized information system which will provide participants with a convenient reference to many pertinent aspects of community health services. The objective is to collect and report information

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once and have the electronic computer system process, compile, rearrange, and report the information in as many different ways as might be useful.

Method. (1) Define nature, scope, and characteristics of a prototype system; (2) investigate sources of data and problems of gathering information on interrelated health activities for local and state, official and voluntary, health agencies; (3) determine kinds of information required for each program area of community health services; (4) design precoded worksheets to collect information needed in such a way that it will require a minimum of professional time; (5) collect and process data, presenting it in a variety of report forms; (6) insure that the system is designed to be adaptable to local community health services in other counties.

Findings. An integrated information system has been developed and data from two major areas in the Washtenaw County Health Department, home health services and environmental health services, are being processed. In each of these areas two separate functions are performed: (1) tabulation of health department activities and (2) registration of the recipients of health services. These include nursing activities and family registration, environmental health activities and premises or property registration. Care has been taken to insure that each component can either stand alone as a self-contained system or be handled as a portion of the larger integrated one. It is planned to field test the system in other selected health jurisdictions. (GEH)

161. EVALUATION OF OEO SUPPORTED NEIGHBORHOOD HEALTH CENTERS

(a) Cecil G. Sheps. (b) In process. (c) Mt. Sinai Medical School, Department of Community Medicine, under sponsorship of Executive Office of the President, Office of Economic Opportunity. (d) None.

Problem. (1) Study, evaluate, and make recommendations for improving methods of organizing and delivering health services to the poor; (2) determine relationships, especially in the United States, among health, health services, and socioeconomic class; (3) evaluate the effectiveness of neighborhood health centers; (4) determine which of the deficiencies in the present system, neighborhood

health centers may be expected to correct. (SIE)

162. THE GOUVERNEUR ECONOMIC RESEARCH PROJECT

(a) Eleanor M. Snyder, Nora K. Piore, and Stanley K. Kahane. (b) In process. Reports published since last Digest report are: Jerry Weston, Utilization of Nursing Services by Residents of the Gouverneur Hospital District, 58 pp.; John O'Rourke, The Economics of Child Health Care in the Gouverneur Area in New York City: An Empirical Analysis, 94 pp.; David L. Littman, A Model of Demand for Medical Care in Low Income Neighborhoods, 34 pp. Available from Urban Research Center, The City University of New York, Hunter College. (c) The City University of New York, Hunter College, Urban Research Center, and the New York City Health Services Administration, under sponsorship of U. S. Department of Health, Education, and Welfare, Public Health Service and Beth Israel Medical Center. (d) 13:2-112.

Problem. New York City's Gouverneur Medical Service Program is an experimental program designed to find, in a particular neighborhood, more effective ways of unifying public health care services now provided in New York City by 25 separate agencies, and of coordinating those services to be provided by private medical practitioners to public beneficiaries. Results of this program could lead to more effective utilization of all health resources in the city as a whole. The current project is a study of health resource allocation, utilization, and costs in a low income neighborhood in New York City. (EMS)

163. NEIGHBORHOOD FAMILY MEDICAL PLAN

(a) Jerome S. Beloff and E. Richard Weirnerman. (b) A continuing project. (c) Yale University, School of Medicine. (d) None.

Problem. Develop and test a model of family-oriented health maintenance.

Previous Research. P. S. Snoke and E. R. Weinerman, "Comprehensive Care Programs in University Medical Centers," J. of Med. Educ., 40, July, 1965, pp. 625-640, served as the basis for design and planning of this teaching and demonstration program.

Method. This program has been in operation as an elective course for two years, involving eight to twelve third- and fourth-year medical students, annually, 150 to 200 family members, and using both medical center and community health resources. The health team consists of student physician (supervised by an internist and pediatrician), public health nurse, and neighborhood health aide, with available specialty consultants in such areas as social work, OB-GYN, and psychiatry. A family health assessment is made involving medical, social, environmental, and family functioning; a family health plan is created by the team. The public health nurse supervises implementation and coordination of all needed health services, serves as clinic nurse and visiting home nurse. The close physician-nurse team relationship to a designated group of neighborhood families reduces the common fragmentation in patient care and enhances continuity. The student physician has 24-hour per day responsibility for three to four families over a full academic year. Service includes a clinic session per week, one family care seminar, phone calls from patients, home visits, and emergency calls. The health maintenance given the patients, in practice, consists of organized preventive medicine services, acute care, and arranging for specialized health or rehabilitation services.

New record keeping instruments and team conferences improve communication for high quality service and teaching. Utilization data for all provided services are collected. Evaluation involves objective analysis of the attitudes and behavior of the students, as well as changes in family functioning and health status of the patients. Instruments for these evaluations have been developed and tested.

Findings. The experience of two years suggests that this model of family-oriented health maintenance is viable for both teaching and community service in a university medical center. (JSB)

164. STUDY OF NEIGHBORHOOD CENTERS AND MENTAL HEALTH AIDES

(a) Harris B. Peck, Elmer Struening, and Stanley Lehmann. (b) In process. (c) Yeshiva University, Albert Einstein College of Medicine, under sponsorship of U. S. Department of Health, Education, and Welfare, Public Health Service. (d) For related research, see 13:2-1.

Problem. The project studies the Neighborhood Service Centers manned by nonprofessional mental health aides recruited from among the deprived low income residents of the community and supervised by professionals.

Method. (1) Describe the clients of the Centers in terms of personal, demographic, and service rendered information; (2) estimate the selective use of the Centers by comparing the client population with catchment area population; (3) evaluate changes in attitude and job performance of the Mental Health Aides; (4) compare populations of religious organizations, matched on socioeconomic variables but different in religious doctrine-ideology, on variables of symptom manifestation, coping behavior, and defense preference; (5) develop a multi-dimensional rating scale to measure on-the-job performance of Mental Health Aides; (6) develop a rating scale to measure defense preference and symptom manifestation which will differentiate a low income population; (7) further develop a record-keeping system which will document mental health-illness relevant changes in a low income community; (8) identify medical-environmental characteristics of mothers associated with premature birth; and (9) identify types of stimuli which influence selected populations to make more effective use of mental health facilities. (HBP)

165. CHICAGO REGIONAL HOSPITAL STUDY

(a) Pierre de Vise, Richard L. Morrill, and Brian J. L. Berry. (b) In process. Four series of working papers completed or in preparation: Series I, The Health Care System (completed); Series II, The Urban System (partially completed); Series III, Methods and Concepts (completed); and Series IV, The Planning Component (in preparation). Available from Hospital Planning Council for Metropolitan Chicago.

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(c) Hospital Planning Council for Metropolitan Chicago and the Illinois Department of Public Health, in cooperation with University of Chicago, Center for Urban Studies and the Center for Health Administration Studies, under sponsorship of National Institutes of Health. (d) None.

Problem. Develop means of evaluating the adequacy of the present distribution of hospital facilities and estimating the best distribution of future capacity. (CAS)

166. PROGRAMMING METROPOLITAN HOSPITAL GROWTH

(a) Ronald E. Miller and Jerry B. Schneider. (b) In process. Three RSRI Discussion Papers published since last Digest report: No. 11, Measuring the Locational Efficiency of the Urban Hospital; No. 14, The Spatial Structure of the Medical Care Process; and No. 16, A New Approach to the Delineation of Hospital Service Areas. Copies available from Regional Science Research Institute, GPO Box 8776, Philadelphia, Pennsylvania 19101, for \$1.00, \$1.50, and \$1.50 per copy, respectively. (c) Regional Science Research Institute (Seattle Office). (d) 13:2-142.

Problem. To develop and test empirically techniques for measuring and explaining the relative "accessibility" and "attractiveness" of individual hospitals to various patient groups for the purpose of locating additional hospital capacity.

Method. Methods of centrographic analysis have been applied to an extensive set of data from the Cincinnati, Ohio, metropolitan area regarding hospital admissions, patient residential locations, and physician's offices, in an effort to develop quantitative measures of patient-hospital-physician's office spatial relationships.

Findings. DP No. 11 presents a measure of locational efficiency, the locational imbalance vector (LIVOR), and demonstrates its application in the analysis of nineteen hospitals which provide medical, surgical, and obstetrical services in the Cincinnati metropolitan area. The locational efficiency of individual hospitals varies greatly and several centrally located hospitals, in

particular, are located poorly with respect to the patients they serve. Some possible policy implications of this measure are illustrated and its relation to the larger question of explaining the pattern of occupancy pressure in a metropolitan area is discussed briefly.

DP No. 14 represents an attempt to describe and relate the spatial characteristics of hospitals, their patients, and physicians' offices in Cincinnati. The center and relative dispersion of each of these spatially distributed groups is computed and a locational inefficiency index (LINEX) is developed and applied in the measurement of the degree of spatial correspondence between hospital admission and patient residence patterns. The methods developed are also applied in the design of two new hospital systems, both locationally more efficient than the existing one. The centralization-decentralization dilemma is posed in a hospital planning context and suggestions for resolving it presented.

DP No. 16 discusses present concepts relating to delineation of hospital service areas and finds them deficient in several respects. A new approach, based on analysis of actual patient-hospital movement patterns is developed which makes it possible to describe and measure the geographic area actually served by various hospitals in a consistent and standardized manner. It facilitates comparisons of sizes and shapes of service areas of different hospitals, permits general identification of patterns of inter-hospital competition, and shows effects of topographic barriers on hospital utilization patterns. (JBS)

167. CAPITAL EXPENDITURES OF HOSPITALS

(a) Charlotte F. Muller. (b) In process. (c) Columbia University, Graduate School of Public Health and Administrative Medicine, under sponsorship of U. S. Department of Health, Education, and Welfare, Public Health Service. (d) None.

Problem. A pilot study of the capital expenditure process and the investment experience in New York City hospitals. Realizing the importance of capital policy in assuring adequate allocation of resources to meet community health needs, and the need for more knowledge of actual practice

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to aid in effective planning, the project is designed to develop an approach capable of identifying and evaluating some of the factors that influence capital expenditures in hospitals.

Method. Several pertinent data sources are being utilized for various purposes. (1) Plant fund accounts for about 50 voluntary general hospitals, as reported to the United Hospital Fund, are being analyzed to determine the amount of investment in plant and equipment of these hospitals, 1945-1965. Association of investment with variables such as admissions, proportion of semi-private to total care, intensity of services per admission, and teaching activities is being studied. (2) Major characteristics of capital formation reported in 124 hospital projects and 31 nursing home projects formulated and submitted under state law to the Health and Hospital Planning Council of Southern New York during the period October, 1964, to June, 1967, are being analyzed. (3) The time requirements of capital formation in major municipal hospital projects are being studied by a review of monthly progress data furnished by the New York City Department of Public Works for 22 projects spanning the period 1945-1967. (CM)

168. APPLICATION OF NEWER TECHNOLOGIES TO HEALTH CARE (COMPUTER PROCESSING OF CLINICAL PULMONARY FUNCTION DATA)

(a) Marcella Czarnecki, Edna Sorenson, Dwight Kresge, Thomas Godar, and Robert Huszar. (b) In process. Computer system in routine use. Report to be available in early 1968. Data analysis planned for 1968. (c) The Travelers Research Center, Inc., and St. Francis Hospital, as part of "The Environment and Man" program, under sponsorship of The Travelers Corporation. (d) None.

Problem. (1) To demonstrate the feasibility of computer application to health care in a community hospital utilizing community resources; (2) to obtain easily accessible pulmonary function data for future statistical analysis.

Findings. (1) Implementation of this computer processing program in this community hospital presented no major problems; (2) computer printout as an official clinical record was well received by hospital clin-

ical staff; (3) significant improvement in accuracy, processing time, and increased information was obtained. (DJK)

169. DEVELOPMENT OF A COMPREHENSIVE ADULT HEALTH PROGRAM

(a) Rodney C. Jung. (b) In process. (c) City of New Orleans, Health Department, in cooperation with Tulane University, School of Medicine, under sponsorship of U. S. Department of Health, Education, and Welfare. (d) None.

Problem. Demonstrate a comprehensive health program for the aged in an urban area, utilizing the coordinated services and/or facilities of a city health department, a school of medicine, a public housing authority, and volunteer community health agencies--all targeted toward developing and/or making available adequate and appropriate out-of-hospital health and health related services for the chronically ill and aged on a model basis.

Method. Tulane School of Medicine will conduct medical screening tests on volunteer Guste Homes' residents; definitive medical diagnostic work-ups when screening indicates need; referral for hospitalization when medically necessary; research in depth on the cardiovascular system of a representative number of patients; and geriatric medical care training for undergraduate and graduate medical students. The New Orleans Health Department will provide out-of-hospital nursing and have health aide services, under medical direction, working in cooperation with health department personnel in social work, nutrition, and health education. Expansion of the program is geared to a five-year schedule to make available out-of-hospital health and health related services to any chronically ill and aged resident needing such services in New Orleans. Consultative services to communities, agencies, and other groups will be available upon request. (RCJ)

170. OPERATIONS RESEARCH APPLICATIONS IN MENTAL HEALTH

(a) John B. Deiter, William H. Peckham, Joanne Baseheart, James Michelsen, Nancy Wing, and James M. Foster.

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(b) In process. (c) State of Michigan, Department of Mental Health, under sponsorship of U. S. Department of Health, Education, and Welfare, Public Health Service. (d) None.

Problem. Investigate the feasibility of application of operations research methods and techniques in the setting of the decisional and management problems in Michigan's Mental Health Program. Focus will be on the development of a complete model of the functional system. Segmental studies, such as those of community data systems, hospital admission and discharge procedures, service line monitoring systems, and cohort studies, will be conducted not only for immediate problem solution, but also for filling in missing parts of the total model.

Method. The project will use the team approach in formulating problems in consultation with those in decision-making positions within the State's mental health system, constructing a model of the problem system, deriving and testing solutions and developing controls and monitoring systems for such solutions, and finally, implementing the solution into the total system.

Special projects of brief duration will be conducted for, or in conjunction with, various field facilities of the Department. Those types of problems common to and expected to have solutions common to classes of organizations within the organization will be studied. Finally, the Department's broad objectives and long-term goals will be formulated in ways that will provide a direct and operationally meaningful set of criteria to be used in meeting the goals of the Operations Research project. (JBD)

171. PROGRAM FOR RESEARCH IN PSYCHIATRIC SOCIOLOGY

(a) Leo Srole. (b) In process. (c) Columbia University, College of Physicians and Surgeons, under sponsorship of U. S. Department of Health, Education, and Welfare, Public Health Service. (d) None.

Problem. (1) Explore inter-penetrations of sociological and psychological parameters of mental health in general (nonpatient) populations; (2) conduct such explorations within an environmental framework that articulates the macrosociological focus on

communities and their large demographic groups with focus on family units; (3) test and refine: (a) The Parsons social-system-dysfunctions theory of the etiology of intra-psychic and behavioral malfunctions; (b) the Srole office-role theory, articulating institutional and individual levels of functioning; (c) The Leighton theory of social disintegration as a consequence of social change; (d) The Srole social resource theory of individual immunity-susceptibility to personality disorganization under exogenous crisis; (e) the Midtown Study generalization that poverty of parents is a major determinant of mental malfunctions in their children; (4) demonstrate the potentialities of cross-survey, comparative analyses; (5) demonstrate the magnitude of untouched data remaining in presumably completed community-epidemiological sample surveys of mental health; (6) demonstrate the increased volume and speed of data return from a program-project's breadth of conceptual approach and flexibility of method; (7) extend the broad perspectives and concepts of social science to other disciplines and adjoining research units in the Columbia Faculty of Medicine and the New York State Psychiatric Institute through regular consultation and collaborative research; (8) provide a center for trainees and post-trainees from such affiliated disciplines and units to have at least one year of apprenticeship experience in the research operations of psychiatric sociology.

Welfare

172. EVALUATION FRAMEWORK FOR LOCAL POVERTY PROGRAM

(a) Joseph Duncan and Eleanor K. Caplan. (b) In process. (c) Battelle Memorial Institute, Urban Studies Center, under sponsorship of Council for Economic Opportunity of Greater Cleveland. (d) None.

Problem. Develop an evaluation framework, a model, and a procedures manual for the Council of Economic Opportunity of Greater Cleveland. The framework utilizes the systems analysis approach to evaluation. Components of the system will allow cost-benefit and PPBS analyses to be used for each separate program, as well as an overall analysis of the total program, if proper records are kept. Basic categories and

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procedures for developing categories will be included in the manual. (HG)

173. EVALUATION OF THE POVERTY PROGRAM BY
SELECTED CASE STUDIES, GREAT LAKES
REGION

- (a) Frank R. Breul, Robert Crain, Adelaide Dinwoodie, J. David Greenstone, Jack Meltzer, Raphael Nystrand, Paul Peterson, Harold Richman, and Irving Spergel. (b) Completed May, 1967. Submitted as a report to the sponsor. (c) University of Chicago, Center for Urban Studies, under sponsorship of the U. S. Senate, Committee on Labor and Public Welfare, Subcommittee on Employment, Manpower, and Poverty. (d) None.

Problem. Evaluate the operation of the poverty program through case studies of Community Action and Technical Assistance Agencies in selected cities, counties, and states in the Great Lakes Region. (CAS)

174. STUDY AND EVALUATION OF THE COMMUNITY
ACTION PROGRAM IN AUSTIN, TEXAS

- (a) Not reported. (b) In process. (c) TRACOR, Inc., under sponsorship of Executive Office of the President, Office of Economic Opportunity. (d) None.

Problem. Determine whether the CAP of Austin and Travis County enables the poor to: (1) aspire for change in their poverty culture, and (2) seek out community services in an effort to help themselves become better adapted to and more satisfied with the demands of modern society. Austin is an excellent community in which to conduct a study of the CAP. There has been a steady increase in the size of the Negro population in Austin, but without an increase in the size of the area in which they live--leading to overcrowding, delinquency, and health problems. On the city's occupational ladder, more than two-thirds of the heads of households in blighted areas are in unskilled and semiskilled positions. Unemployment is particularly high in Latin areas, but not extensive in Negro areas of the city.

Method. Trace the operations of the CAP over an 18-month period. The target popu-

lations, objectives, anticipated and unanticipated consequences of the CAP, and operational changes in the program are being carefully documented in successive periods of the research effort. (SIE)

175. RICHMOND COMMUNITY DEVELOPMENT
RESEARCH

- (a) Alan B. Wilson and William R. Smith. (b) In process. This project is a continuation of the evaluation conducted for the Richmond Community Development Demonstration Project. (c) University of California (Berkeley), Department of Education, under sponsorship of Executive Office of the President, Office of Economic Opportunity. (d) None.

Problem. Describe and measure the effectiveness and consequences of programs of the Richmond Community Development Demonstration Project. These programs are designed to increase the ability of low income residents of the community to deal with their social problems by: (1) supporting the growth and development of indigenous organizations to perform social service functions; (2) developing new social service jobs in the community related to these organizations; and (3) establishing new career lines in selected public agencies serving the low income community, with particular emphasis on the processes by which these new careers can be made permanent and utilized to bring about agency change.

Method. In each of the program areas: (1) describe the program; (2) conduct before-and-after measures to assess effects; and (3) analyze institutional change. (SIE)

176. ANALYSIS AND EVALUATION OF THE SEATTLE
AND THE KING COUNTY, WASHINGTON
COMMUNITY ACTION PROGRAM

- (a) Charles B. Brink. (b) In process. (c) University of Washington, Graduate School, under sponsorship of Executive Office of the President, Office of Economic Opportunity. (d) None.

Problem. (1) Provide a design for a comprehensive and systematic evaluation of the Community Action Program and related programs; (2) gather relevant baseline data for measuring

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the collective effect of their impact on the characteristics and level of poverty; (3) study the formal organization of the Community Action Agency and analyze the effect of its structure and conduct on the operations of component programs; (4) evaluate systematically the key programs' components; (5) analyze the net impact of the total program effort related to community action on poverty. (SIE)

177. EVALUATION OF COMMUNITY ACTION PROGRAMS IN ATLANTA, GEORGIA

(a) Fred Crawford. (b) In process. (c) Emory University, Graduate School, under sponsorship of Executive Office of the President, Office of Economic Opportunity. (d) None.

Problem. (1) Submit report containing design for a comprehensive and systematic evaluation of the Community Action Program and related programs; (2) gather relevant baseline data for measuring their collective effect on the characteristics and level of poverty; (3) study and analyze the formal organization of the Community Action Agency; (4) evaluate systematically the key programs' components related to the Community Action Program; (5) analyze the net impact of the Community Action Program. (SIE)

178. STUDY AND EVALUATION OF COMMUNITY ACTION PROGRAMS IN BALTIMORE, MARYLAND

(a) William G. Grigsby. (b) In process. (c) University of Pennsylvania, Institute of Environmental Studies, under sponsorship of Executive Office of the President, Office of Economic Opportunity. (d) None.

Problem. (1) Design a comprehensive and systematic evaluation of the Community Action Program and related programs; (2) gather relevant baseline data for measuring their collective effect on the characteristics and level of poverty; (3) study and analyze the formal organization of the Community Action Agency; (4) evaluate systematically the key component programs related to the Community Action Agency; (5) analyze the net impact of the Community Action Agency. (SIE)

179. STUDY AND EVALUATION OF COMMUNITY ACTION PROGRAMS IN SAN DIEGO, CALIFORNIA

(a) Lawrence Solomon. (b) In process. (c) Western Behavioral Sciences Institute, under sponsorship of Executive Office of the President, Office of Economic Opportunity. (d) None.

Problem. (1) Submit report containing design for a comprehensive and systematic evaluation of the Community Action Program and related programs; (2) gather relevant baseline data for measuring their collective effect on the characteristics and level of poverty; (3) study and analyze the formal organization of the Community Action Agency; (4) evaluate systematically the key programs' components related to the Community Action Program; (5) analyze the net impact of the total program. (SIE)

180. PREVENTION OF FAMILY DISORGANIZATION

(a) Ludwig Geismar. (b) In process. (c) Rutgers, The State University, Graduate School of Social Work. (d) None.

Problem. (1) Study family organization by longitudinal research on the social functioning of a sample of young urban families in Newark, New Jersey; (2) provide multifaceted social work services to families showing signs of disorganization; (3) evaluate the effects of such services.

Method. A sample of 600 families drawn from a list of mothers under 30 years of age who gave birth to their first children in 1964, will be randomly allocated to one experimental and two control groups. The experimental group will receive special services and be interviewed before, during, and after treatment. Methods of intervention include casework with parents, educational assistance, group work, and material assistance. The St. Paul Scale of Family Functioning will be used to evaluate the effects of intervention. Information will be secured regarding experience on public assistance, officially reported instances of crime or delinquency, institutionalization, and the incidence of alcoholism. (JS)

181. OLDER VOLUNTEERS IN COMMUNITY SERVICE

- (a) Janet S. Sainer and Ann W. Shyne.
 (b) In process. (c) Community Service Society, under sponsorship of U. S. Department of Health, Education, and Welfare, Administration on Aging.
 (d) None.

Problem. To develop, apply, and assess the efficiency of group methods in recruiting, placing, training, and retaining men and women 60 years of age and older as volunteers in community service, in order to create a new and satisfying role for older persons.

Method. Develop Affiliated Group Projects with selected cooperating community agencies. The procedure is: (1) commitment by an agency to develop placement opportunities for volunteers on a group basis and participate in their training and supervision; (2) organization by sponsor of groups recruited from community organizations and unaffiliated persons to give individual service regularly to a specific agency; (3) initial sponsor involvement to develop specific volunteer jobs, recruit suitable candidates, and conduct specialized training and retention programs; (4) reduced sponsor involvement as each Affiliated Group Project becomes firmly established and plans are developed to ensure continuity. To evaluate the methods and procedures used, detailed descriptive data will be collected systematically on the activities of project staff, time-cost factors in use of volunteers, number and characteristics of volunteers participating in each phase of the program, and characteristics of the placement settings. Evaluations will also be obtained periodically from volunteers, project staff, and staff of cooperating agencies. (JWC)

182. SENIOR ADVISORY SERVICE FOR PUBLIC HOUSING TENANTS

- (a) Jean Wallace Carey and Jeannette Katz. (b) A four-year demonstration in process. (c) Community Service Society of New York, under sponsorship of U. S. Department of Health, Education, and Welfare, Public Health Service. (d) None.

Problem. Provide and evaluate a two-year Senior Advisory Service for persons aged 60 years or over. To sustain emotional,

social and physical functioning through the presence, reaching out, and service (referral, facilitative of mutual-aid programs, and generally supportive) of a worker concerned with making personal, neighborhood, and community resources and services available when these would be most helpful; and to test the feasibility and effectiveness of such service.

Method. Assign, in each of four public housing projects, one paid worker of mature years, in-service trained under a structured plan and supervised by a social worker.

Analyze data: (1) analyze data on needs and requests for service, referrals and other activities of project staff, and direct outcome of services rendered; (2) review work performance of service workers; (3) analyze nature and direction of change through comparison of before-and-after service functioning based on interview schedules administered to stratified random samples of the four elderly populations; and (4) assess, by control group design, the confidence with which improvement or lack of deterioration in the functioning of the served populations can be ascribed to the Senior Advisory Service. (JWC)

183. GROUP CARE HOMES FOR ADOLESCENT GIRLS

- (a) Raleigh C. Hobson, Isadore Tuerk, and Jerome Lewin. (b) In process. (c) Friends of Psychiatric Research, Inc., State of Maryland, Department of Welfare and Department of Mental Hygiene, under sponsorship of State of Maryland and U. S. Department of Health, Education, and Welfare, Office of Juvenile Delinquency and Youth Development. (d) None.

Problem. Establish two Group Homes in Baltimore, one in an Urban Renewal Area the other in a racially-mixed neighborhood, to demonstrate the feasibility, practicability, efficacy and value of the "Group Home" as a specialized community resource that can be the treatment and placement of choice and serve as a preventive of future delinquency or emotional disturbance for many troubled, disturbed, or otherwise vulnerable adolescent youth without socially-emotionally supportive families. Essential components of the concept are: stable, structured, family-type social unit, democratic integration of the Group Home and its residents

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into the social fabric of the local neighborhood and larger community, and offering the residents educational and vocational opportunities, case-work counseling and, when indicated, psychotherapy. The Group Home is an open-residential, community-based treatment facility that can function as an after-care facility, half-way house, and an alternative to institutionalization. (RCH)

184. BOSTON YOUTH OPPORTUNITIES PROJECT

(a) Joseph S. Slavet, Leonard R. Leighton, Robert Perlman, Clarence C. Sherwood, and Leo C. Renaud. (b) In process. (c) Action for Boston Community Development, Inc., under sponsorship of U. S. Department of Health, Education, and Welfare, Office of Juvenile Delinquency and Youth Development. (d) None.

Problem. A three-year, action-research demonstration to reduce the volume and seriousness of criminal-type behavior among male youths 12 through 16 years of age, residing in three high-delinquency areas of Boston.

Method. Sixteen programs are directed at youths and at those adults who are significant influences on the youths. The programs include job training and employment; coordinated neighborhood-based health, welfare, and legal services for families; educational programs in reading, guidance, and counseling; tutoring; scholarship incentives; ability identification and development; home-school liaison. Each program will be evaluated to determine whether it achieves its specific objective (e.g. improvement in reading skills) and whether by achieving its objective, it contributes to the reduction of law-violating acts. (SIE)

185. TRAINING JUVENILE GANG LEADERS TO BECOME STREETWORKERS

(a) Mario D'Angeli, Lester Tarnopol, and Orville Luster. (b) In process. (c) San Francisco State College, The Frederic Burk Foundation, Department of Social Welfare, City College of San Francisco, and Youth for Service Agency, under sponsorship of U. S. Department of Health, Education, and Welfare, Office of Juvenile Delinquency

and Youth Development. (d) None.

Problem. A two-year training project to prepare 20 youth leaders of inner-city juvenile gangs to become streetworkers as well as prepare them to occupy staff roles in a variety of new public agency programs.

Method. The trainees are attached to a delinquency prevention agency in San Francisco, Youth for Service, and educated to become streetworkers in a program designed to help gang boys participate with public agency officials in developing and executing projects that might better meet the needs of slum youth. These gang leaders are also being trained to staff the projects developed under this new program. The Youth for Service Staff are being trained to help supervise their field experiences. A research team will describe and evaluate the training and community development dimensions of the project. (MD)

186. YOUTH-ADMINISTERED SOCIAL SERVICES AND SOCIAL ACTION

(a) Philip Kramer, Irwin Donald Forman, and Leroy McRae. (b) In process. (c) Mobilization for Youth, Inc., under sponsorship of U. S. Department of Health, Education, and Welfare, Welfare Administration, Office of Juvenile Delinquency and Youth Development. (d) None.

Problem. Evaluate the relative effect of the provision of social services to adolescents, age 16 to 21, in a professionally administered adolescent service center compared with an adolescent-administered center. The demonstration is also concerned with the consequences for an adolescent social action group of expanding its functions to include providing social services. (PK)

187. THE EXTENT AND ADEQUACY OF THE EXISTING PHYSICAL PLANT, UNDER SOCIAL WORK AUSPICES, FOR THE GROUP CARE OF CHILDREN

(a) Donnell M. Pappenfort, Sister Mary Emmanuel, and Adelaide Dinwoodie. (b) In process. Project Report #1, Number and Kinds of Children's Residential Institutions in the United States, to be published as a monograph by the

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Children's Bureau. (c) University of Chicago, Center for Urban Studies, under sponsorship of U. S. Department of Health, Education, and Welfare, Children's Bureau. (d) 13:1-63.

ment of Industry and Trade, Outdoor Recreation Planning Unit, and U. S. Department of Interior, Bureau of Outdoor Recreation. S. E. Regional Office. (d) None.

Problem. A national study of physical facilities housing children's institutions to: determine characteristics of existing plant; relate these facts to emerging functions of children's institutions and to kinds of new program demands on facilities that result; and estimate both the extent to which institutional child care programs would substantially benefit from change, remodeling, or rebuilding of physical settings and the scope, cost, financing, and other problems of such rehabilitation programs.

Research procedures are now being adapted to the special requirements of research on institutions for physically handicapped and mentally retarded children in order to complete the study of residential facilities for children. (CAS)

Problem. Conduct studies to provide basic supportive planning data for the development of the Georgia State Comprehensive Outdoor Recreation plan. Specialized individual studies are being undertaken in these areas: (1) outdoor recreation resources and facilities; (2) determination and projection of demand; (3) evaluation of need; (4) special problems (needs of urban population, quality of outdoor environment, access to recreation resources, recreation and conservation education, meeting the needs of the aged and the handicapped, meeting the needs of the economically disadvantaged, recreation planning research, coordination among public agencies); and action program (financing of recreation, recreation legislation, and public administration of recreation). (JRC)

Recreation

188. TOURISM AND RECREATION

(a) Not reported. (b) Completed and published under the above title. Available from the Superintendent of Documents, U. S. Government Printing Office, Washington, D. C. 20402. 301 pp. \$1.50 per copy. (c) Arthur D. Little, Inc., under contract with the Economic Development Administration. (d) None.

Problem. The study surveys much of the research already completed in the field of domestic travel and outdoor recreation in this country. It assembles a broad base of data useful in planning and promoting a wide variety of outdoor recreation and travel activities, and in measuring their impact on the regional economy. (JCS)

189. SCORP--UNIVERSITY OUTDOOR RECREATION RESEARCH STUDY SERIES

(a) James R. Champlin and John R. Thompson. (b) In process. (c) University of Georgia, Institute of Community and Area Development, under sponsorship of State of Georgia, Depart-

190. ROAD-ORIENTED RECREATION: AN ACTIVITY AND DESIGN ANALYSIS

(a) Carol P. Kennedy. (b) In process. Completion expected April, 1968. (c) Wayne State University, Department of Urban Planning. (d) None.

Problem. Analyze physical, economic, and political factors influencing the location of active and passive recreation along highways. The study includes consideration of: (1) basic need for roadside development; (2) activities and corresponding physical facilities which can be oriented to highways; (3) economic and political factors affecting the acquisition of land or facilities; and (4) corridor design proposing maximum recreation use.

Method. (1) Investigate activities, highway types, economic limitations, and legal tools; (2) conduct Michigan road survey and design for maximum use along its corridor; (3) propose utilization of technique in comprehensive planning. (CPK)

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191. STATE OUTDOOR RECREATION PLANS

(a) Mary A. Vance. (b) Completed and published under above title. Council of Planning Librarians, Exchange Bibliography No. 34. November, 1967. 7 pp. \$1.00. Available from Mrs. Vance at P. O. Box 229, Monticello, Illinois 61856. (c) Council of Planning Librarians. (d) None.

Problem. An unannotated bibliography of recreation plans and works related to the field of outdoor recreation planning. Listings are by state. (ML)

Cultural Activities

192. A COMPARATIVE STUDY OF SELECTED NEW YORK CITY PUBLIC LIBRARIES

(a) Blanche D. Blank, Rita J. Immerman, and Peter Rydell. (b) Nearing completion. (c) City University of New York, Hunter College, Urban Research Center. (d) 13:2-111.

Problem. To conduct a systematic, comparative study of municipal bureaucracies with a focus on library systems for this initial project. Among main objectives were the determination of how equitably library services were distributed within New York City; the relationship of demographic variables to library outputs; and the relationship of organizational variables designed to measure structure, morale, and leadership to library outputs.

Method. Correlations and comparisons between 45 variables collected for thirteen local library units within New York City and clustered according to staff and clientele satisfaction, community attributes, staff perceptions and morale, and material and personnel resource allocations. Data for the variables were collected through interviews with librarians, surveys of library users, and reference to census and other "hard data" sources.

Findings. Library resources are not equitably distributed among local library units. The level of satisfaction of library clientele is not significantly associated with the unequal distribution of resources, nor with personnel characteristics. However, satisfaction levels do correlate with demographic factors. (NS)

V. LAND USE AND TRANSPORTATION

Urban Design

193. DESIGN OF CITIES

(a) Edmund N. Bacon. (b) Completed. Published in 1967 by The Viking Press, Inc., 625 Madison Avenue, New York, New York 10022, 296 pp. \$15.00 per copy. (c) University of Pennsylvania Institute for Environmental Studies, under sponsorship of Rockefeller Foundation and Ford Foundation. (d) 13:1-171.

Problem. Analysis of principles of urban design as demonstrated in the growth and development of a number of cities throughout history, from classical Athens to the present, and application of these principles to contemporary urban design.

Findings. In his study of various cities, the investigator reinforces his thesis that cities are for people and that citizens should have the opportunity to see plans in the initial stages of a city planning project in order to evaluate the proposals. This provision for "democratic feedback" is also important for the designer, whose plans can then be modified to meet the needs of the people. The investigator is convinced that the center of cities can and should be pleasant places in which to live and work, and cites Rotterdam, Stockholm, and Philadelphia to illustrate this point. (ML)

194. URBAN DESIGN WITHIN THE COMPREHENSIVE PLANNING PROCESS

(a) M. R. Wolfe and R. D. Shinn. (b) In process. (c) University of Washington, Department of Urban Planning, under sponsorship of U. S. Department of Housing and Urban Development. (d) None.

Problem. Generally, to clarify conceptual approaches in urban design as applied in comprehensive urban planning. Specifically, to provide a guideline document, and to demonstrate by means of a case study how an urban design component may evolve within the comprehensive planning process and be added to an existing comprehensive plan.

Method. For the case study community, the project will identify and classify the visual resources of the community; develop examples of conservation efforts to protect and enhance existing and emerging perceptual experiences; illustrate public policies that set out a design framework; and develop alternative design schemes and measures necessary for the implementation of selected alternatives. (MRW)

Urban Renewal

195. TRAINING FOR REHABILITATION SPECIALISTS

- (a) Not reported. (b) In process. Reports on project activities to be prepared, published, and distributed by Massachusetts Bay Community College. (c) Massachusetts Bay Community College in Boston, under sponsorship of U. S. Department of Housing and Urban Development. (d) None.

Problem. Develop and test a program for in-service and pre-service training for specialists in residential rehabilitation.

Method. Trainees will receive orientation and instruction in home maintenance and construction services, housing codes, planning and design aspects of rehabilitation, and financing of home improvements and repairs. Local agencies in the Boston area engaged in codes enforcement, urban renewal, and residential rehabilitation will share in the costs of the project by paying a portion of the costs for their employees attending the training program. (JFM)

196. SMALL BUSINESS RELOCATION AND DEVELOPMENT STUDY

- (a) Brian J. L. Berry. (b) In process. To be published in the Research Series of the Department of Geography, University of Chicago, 1967. Four background papers completed: No. 1, Changing Congressional Provisions for Small Businesses Displaced by Urban Renewal; No. 2, Displacement Effects of Urban Renewal Upon Small Business: A Survey of the Literature; No. 3, Methods of Relocating the Commercial Displacee: The Hyde Park Experiments; No. 4, Comparative Mortality Experience of Small

Business in Four Chicago Communities. (c) University of Chicago, Center for Urban Studies, under sponsorship of the U. S. Department of Housing and Urban Development, and City of Chicago Department of Urban Renewal. (d) 13:1-64.

Problem. A study of the problems of small merchant relocation and development in the Hyde Park neighborhood, the City of Chicago, and the nation, to: (1) answer a series of questions concerning both the direct and indirect impact of urban renewal on small businesses; and (2) codify the types of relocation possibilities that exist, and describe relevant relocation techniques. (CAS)

197. COLLEGE HILL: A DEMONSTRATION STUDY OF HISTORIC AREA RENEWAL

- (a) William D. Warner. (b) Completed. Second edition published May, 1967, by College Hill Press. Copies available from City Plan Commission, City Hall, Providence, Rhode Island 02903. (c) Providence City Plan Commission, in cooperation with Providence Preservation Society and U. S. Department of Housing and Urban Development. (d) None.

Problem. The aim of the project is to consider the broad range of problems that beset an old section of a city and develop methods and techniques for a program of preservation, rehabilitation, and renewal of an historic area.

The first edition of the report represents the period from the project's inception in April 1957, to 1959, and includes the survey techniques, a general description of the College Hill area, detailed proposals and the recommended program for renewal. The second edition contains all of the above, and, in Part IV, includes a report on the progress that has been made from 1959 to 1965. Part IV reviews the key recommendations of the original study and reports the progress made in each of the areas; assesses the current urban renewal and private restoration programs; and reports on uses made of the study elsewhere.

Findings. The demonstration study generated enough local and national interest that specific action was taken on its proposals and recommendations. Governmental programs at the municipal level have been undertaken

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to implement each of the recommendations. Urban renewal activity has been heightened in the area and there is much public and private concern for the results of the activity. A once declining but historic area of the city has been preserved and enhanced. The study has shown the favorable results that can be derived from a comprehensive approach to historic area renewal. (ML)

Land Use--General

198. THE SOCIAL EVALUATION OF NONRESIDENTIAL LAND USE--SUBSTANDARDNESS CRITERIA

(a) Albert Z. Guttenberg. (b) Completed and published September, 1967. Available from Bureau of Community Planning, University of Illinois, 1202 West California, Urbana, Illinois 61801. 28 pp. \$1.50 per copy. (c) University of Illinois, Bureau of Community Planning. (d) None.

Problem. The report suggests a method for evaluating nonresidential land use in line with the full range of contemporary social concerns. The special features of the method are the equal consideration given to the various social interests which meet in a single parcel of property, and the connection made between each interest and the objective features of a property, physical and non-physical, which affect it. The report includes 18 pages of substandardness criteria, cast in the form of two survey schedules, one for office use and one for field use. (AZG)

199. PROTECTING THE AIRPORT ENVIRONMENT

(a) Michael J. Meshenberg. (b) In process. Completion expected by the end of 1967. Report available only to subscribers to ASPO's Planning Advisory Service. (c) American Society of Planning Officials. (d) None.

Problem. To study the relationship of the airport with surrounding land uses and to determine the most appropriate methods of controlling such uses to the mutual benefit of the airport and its neighbors.

Method. Analysis of periodical and other literature to determine the nature and extent

of the problem and an examination of all available methods currently being used or proposed for use to ensure the safe passage of aircraft through the navigable airspace while minimizing the detrimental effects on the environment.

Findings. In the past, the major concern was with protecting airport approaches from obstructions; more recently, emphasis has been placed on minimizing crash damage potential and the effects of noise on the airport's surroundings. Although noise suppressors at the source are in use, zoning and other land use controls are increasingly being relied upon to restrict incompatible uses in the vicinity of the airport. Problems with applying such controls have arisen because numerous political units are involved and because there are major legal limits to using police power for such purposes. Combining regulatory techniques with complete or partial land purchase based on area-wide development plans is seen as an important step toward solving this increasingly important problem. (LS)

Land Use--Industrial

200. STUDY OF SCRAP-HANDLING ESTABLISHMENTS

(a) Edward Limoges. (b) In process. (c) City of New York, Department of City Planning. (d) None.

Problem. Study establishments holding a NYC junk shop license, with regard to their spatial distribution, materials handled, size and characteristics of parcel and operations performed, in order to assess land relationships of these activities and better understand the role of the salvage industry in waste disposal. (SIE)

Land Use--Commercial

201. GEOGRAPHIC ASPECTS OF THE TOURIST INDUSTRY IN METROPOLITAN WASHINGTON

(a) Benjamin F. Holmes and Dean Miller. (b) In process. (c) Pennsylvania State University, Graduate School, in cooperation with University of Maryland, Department of Geography. (d) None.

Problem. To explain how the use of recreation and tourist attractions in Washington is associated with actual geographical location and spatial relationship.

Method. Eight hundred questionnaires were mailed to tourists subsequent to their visits to Metropolitan Washington, of which 660 were completed and returned. The pattern of commercial recreation and tourism, residence of tourists, means of travel, destinations, volume, length of trips, length of stays, accommodations used, characteristics of visitors, major attractions, revenue, the cultural setting, the historical scene, regionalization, and problems potentialities are being analyzed and conclusions formulated.

Both empirical and theoretical approaches are employed. (BFH)

Land Use--Residential

202. DESIGN OF THE HOUSING SITE: A CRITIQUE OF AMERICAN PRACTICE

(a) Robert D. Katz. (b) Completed. Published in 1966 and distributed by the Small Homes Council--Building Research Council, University of Illinois, Urbana, Illinois. 223 pp. (c) University of Illinois, Department of Urban Planning, under sponsorship of the Federal Housing Administration, Urban Renewal Administration and the Mobile Homes Manufacturers Association. (d) None.

Problem. (1) Identify the factors essential to high quality residential site planning and determine the physical characteristics influencing the quality of site planning of multi-family housing projects; (2) investigate single family housing in order to determine ways of increasing intensity without sacrificing livability; (3) identify current practices of site planning in the U. S. and recommend ways of improving site planning. The emphasis is on design and its relation to livability.

Previous Research. Robert D. Katz, Intensity of Development and Livability of Multi-Family Housing Projects: Design Qualities of European and American Housing Projects (FHA-509), Washington, D. C., U. S. Federal Housing Administration, 1963.

Method. Direct inspection of approximately 700 sites. In each major city, a uniform procedure was followed. This consisted of one week of discussions with local officials, designers, architects, and local developers. Four basic questions were asked related to types of housing, innovations, mixture of housing types, and the effects of ordinances and zoning procedures on site planning in the area.

Findings. The bulk of current site planning in the U. S. is of mediocre quality because of a lack of attention to tenants' needs, lack of variety and innovation, and a lack of the combination of skillful designer and motivated developer. (ML)

203. EXPANSION OF HIGH-VALUE HOUSING IN URBAN AREAS, 1880-1930

(a) Paul Roland Beaudet. (b) In process. (c) Buffalo State University College, Department of Geography, under sponsorship of State University of New York. (d) None.

Problem. Investigate the growth of high-value housing from the central city into the suburbs, from 1880 to 1930. The pattern of high-value housing has been shown by Homer Hoyt to exist in a sector arrangement within the city, beginning at an edge of the central business district and continuing in one direction toward, and into the suburbs. This study is an application of Hoyt's theory to determine why the growth of high-value housing occurred in a sector, rather than circular pattern, from the central business district, and the importance of electric street railways in this pattern.

Hypothesis. The pattern of electric street railways was the principal determinant of the pattern of high-value housing.

Method. Map the pattern of high-value housing. Newspaper sources, library files, atlases, corporation records, real-estate data, local government sources, United States and state census data, field work, and interviews will be used. (SIE)

Open Space

204. CENTRAL PARK IN MEGALOPOLIS: THE POTENTIAL IMPACT OF THE DELAWARE WATER GAP NATIONAL RECREATION AREA ON ITS SURROUNDING COMMUNITIES

(a) Malcolm Rivkin. (b) Completed and published in 1966. Available from Information Services in Urban Economics, 1150 Connecticut Avenue, N. W., Washington, D. C. 20036. 116 pp. \$4.00 per copy. (c) Robert Nathan Associates. (d) None.

Problem. A study conducted for the states of New Jersey and Pennsylvania to examine the economic impact of a major interior "open space" within an area whose urban development will surround that space by the end of this century. Just as Central Park has had a profound influence on land use and value in Manhattan since first envisioned over a century ago, so can the existence of a Delaware Water Gap National Recreation Area, lying within 100 miles of the New York and Philadelphia metropolitan areas, influence much of the Northeast in the coming century. Its effects on land values are already being felt. (JS)

205. THE OPEN SPACE NET--COORDINATION OF MAJOR PUBLIC, QUASI-PUBLIC, AND PRIVATE OPEN SPACE TO MAXIMIZE AMENITY AND UTILITY

(a) Frederick H. Bair, Jr. and ASPO Research Staff. (b) In process. Preliminary findings on concept reported in Florida Planning and Development, January, 1962, and October, 1965; and Proceedings, Soil, Water and Suburbia Conference, DHUD--USDA, 1966. ASPO report tentatively scheduled for April, 1968. To be available only to subscribers to ASPO Planning Advisory Service. (c) American Society of Planning Officials. (d) None.

Problem. To examine potentials for combining major public, quasi-public, and private open space into a multi-purpose network with increased functional utility, diminished public costs, and greater amenity; and to explore possible effects on new and existing neighborhoods, desirable reorientation of planning concepts, and implementing techniques.

Method. Analyze existing open-space patterns and explore possibilities for combining major open spaces into a continuous system including limited access highways, mass transit, major utility easements; major grounds for schools, institutions, churches, and other public and private buildings; parks, golf courses, and other open recreational areas; areas where slopes, soils, or flooding inhibit intensive development or require low ground coverage; watershed protection areas; and open space around major medium to high intensity residential uses. Analyze daily family travel patterns. Propose urban redesign based on land net plus public comfort and convenience. Indicate necessary implementation for building the net, including zoning, subdivision regulation, tax incentive, and other action for guiding private development. (LG)

206. RECREATION LAND ACQUISITION POLICIES AND PROGRAMS IN MIDWESTERN METROPOLITAN AREAS

(a) Thomas J. Wood. (b) In process. (c) Stephen F. Austin State College, School of Forestry. (d) None.

Problem. Identify recreation land acquisition policies and programs in metropolitan areas to include current trends, methods, and problems of park and recreation agencies in metropolitan areas. The scope of the study was limited to fifteen metropolitan areas in five midwestern states, Minnesota, Illinois, Iowa, Nebraska, and Missouri. Specific inquiry was directed to past, current, and future recreation land area, population, methods of acquisition, source of revenue, cost of acquisition, and basic problems encountered.

Method. Data were obtained by mailed questionnaires. (TJW)

Rural Land Use

207. LAND USE AND VALUE IN THE RURAL URBAN FRINGE

(a) Howard A. Clonts, Jr. and W. L. Gibson, Jr. (b) Completed. Findings published by the investigators as Farming In The National Capital Region--Maximum Land Values That Complement

Open Space. Available without charge from the Northern Virginia Regional Planning Commission, 3150 Wilson Blvd., Arlington, Virginia, or the Department of Agricultural Economics, Research Division, Virginia Polytechnic Institute. (c) Virginia Polytechnic Institute, College of Agriculture, under sponsorship of the Northern Virginia Regional Planning and Economic Development Commission, through grant from U. S. Department of Housing and Urban Development, Urban Renewal Administration. (d) None.

Problem. Analyze how well agricultural land uses may complement the goal of open space preservation in urbanizing areas. High land values arising from development potential create a problem of preserving desirable open space in urbanizing areas. Because knowledge of maximum land values farming can support is required for an adequate appraisal of the benefit-burden criterion in administering land use regulations to preserve open space, the study was made to determine net returns to fixed resources under optimum resource allocations on typical farms in the Washington, D. C. Metropolitan Region.

Method. Maximum land values farming can support were derived by assuming land as a residual claimant on returns after payments to other fixed resources were made.

Findings. In general, only grade-A dairy farms were found to be profitable, and capitalized land values varied directly with the number of cows milked. In the Triassic Sandstone Area, a 60-cow dairy farm could support a land value of \$307 per acre. When the size of the dairy herd was increased to 90 cows in milk, a land value of \$638 per acre could be supported. In the Loudoun Valley, corresponding land values grade-A dairy farming could support increased to \$504 and \$798 per acre, respectively. (HAC)

208. DETERMINATION OF LAND VALUES IN THE RURAL-URBAN FRINGE OF EXPANDING METROPOLITAN REGIONS

(a) Howard A. Clonts, Jr. (b) Completion expected by January, 1968. To be published as doctoral dissertation. Limited supply of copies to be available from Department of Agricultural Economics, Virginia Polytechnic Institute. (c) Virginia Polytechnic Institute,

Department of Agricultural Economics, Research Division. (d) None.

Problem. Examine land values in a metropolitan area where shifts from rural to urban land uses are a major phenomenon of the economy. Specific objectives are to: (1) determine factors that have a significant effect on land values in the rural-urban fringe of metropolitan regions. (2) make empirical estimates of the effect of the factors upon the sale value of properties, and determine whether such estimates can contribute to an improvement of appraisal procedures in rural-urban fringe areas.

Previous Research. For related research, see Land Use and Value in the Rural Urban Fringe, Reported in Item 207, above.

Method. A model has been constructed for determination of land values in urbanizing fringe areas based on three broad land uses--residential subdivisions, agriculture, and nonsubdivided, nonagricultural land use. Coefficients are being derived and tested in a multiple regression analysis. Significant differences of selected data will be tested by standard techniques. (HAC)

209. LAND CONVERSION FROM RURAL TO URBAN USES

(a) Andrew D. Mank and Jack Lessinger. (b) In process. (c) University of Washington, Department of Urban Planning, under sponsorship of Urban Land Institute, The J. C. Nichols Foundation. (d) None.

Problem. Determine the effects of converting rural lands to urban uses.

Method. Investigate the conversion of rural lands to urban uses in 188 development submarkets in California for the period of 1950-1964. (JS)

Transportation--General

210. SHIFTING EMPHASIS IN TRANSPORTATION AND ITS IMPLICATIONS FOR RESEARCH

(a) Henry S. Reuss, A. Scheffer Lang, and William J. Ronan. (b) Completed. Published under the above title as

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Highway Research Record No. 183. Available from the Highway Research Board, Publications Department 805, 2101 Constitution Avenue, N. W., Washington, D. C. 20418. 18 pp. \$1.20 per copy. (c) Highway Research Board. (d) None.

Problem. By viewing air, rail, road, and water transport as a single system, the problems that arise from interaction between modes are uncovered faster. How to tackle these problems through research was the subject of a conference session at the Highway Research Board's 1967 Annual Meeting. This publication contains the reports given by the three panel members who took part in the conference, as well as the transcript of the discussion that followed. (DHB)

211. TRANSPORTATION SYSTEM ANALYSIS AND EVALUATION OF ALTERNATE PLANS

(a) See below. (b) Completed and published under the above title as Highway Research Record No. 180. Available from the Highway Research Board, Publications Department 805, 2101 Constitution Avenue, N. W., Washington, D. C. 20418. 132 pp. \$4.00 per copy. (c) Highway Research Board. (d) None.

Problem. The report presents nine papers which, though concerned primarily with specific techniques for transportation system analysis and evaluation, consider the importance of linking sound engineering economy to socioeconomic goals.

Bruce B. Wilson, Land Planning Supervisor of the Wisconsin State Highway Commission, points out the positive results of the Commission's involvement in the policy and procedure review of federally-aided planning assistance programs in the state. Marvin Manheim offers nine principles of transportation system analysis. Morris Hill, A Method for the Evaluation of Transportation Plans, questions the efficacy of the traditional cost-benefit methodology and proposes a "goal-achievement" analysis. Milton Pikarsky, Comprehensive Planning for the Chicago Crosstown Expressway, describes how alternate alignments for the expressway were evaluated and the three specific areas of criteria: traffic and engineering, impact on existing communities, and potential land use improvements. Kozmas Balkus, Transportation Alternate Sketch Plans, discusses sketch plans prepared for the New

York region. William Jessiman, David Brand, Alfred Tumminia, and C. Roger Brussee, A Rational Decision-Making Technique for Transportation Planning, offer a technique that treats all pertinent factors in evaluating transportation improvements through a definition of objectives, evaluation of how each alternative meets each objective, and the resultant selection of the best alternative. Stephen H. Putman, Modeling and Evaluating the Indirect Impacts of Alternative Northeast Corridor Transportation Studies, discusses design concepts and how to use a model forecasting and evaluation system for determining the impact of an alternative transportation system in the Northeast Corridor Project. Howard Duke Niebur, Preliminary Engineering Economy Analysis of Puget Sound Regional Transportation Systems, focuses on the analysis of five alternative urban transportation systems in the Seattle area. W. W. Shaner, Economic Evaluation of Investments in Agricultural Penetration Roads in Developing Countries, submits that the traditional method of road evaluation employed in advanced economies cannot be universally applied and offers an alternative set of procedures that employs economic development concepts. (DHB)

212. SPECIAL TRANSPORTATION REQUIREMENTS IN SMALL CITIES AND TOWNS

(a) Bruce Macy. (b) In process. (c) Midwest Research Institute, under sponsorship of U. S. Department of Housing and Urban Development. (d) None.

Problem. To identify the principal transportation needs and problems confronting our smaller cities and towns.

Method. (1) Identify and categorize different types of transportation problems and needs; (2) determine extent of these problems; (3) identify approaches employed (or proposed in recent local transportation studies) to cope with these problems; (4) identify problem areas for which solutions appear to be especially elusive; and (5) identify problem areas warranting further research. (PLB)

213. PUBLIC PREFERENCE FOR FUTURE INDIVIDUAL TRANSPORTATION

(a) Not reported. (b) In process. An interim report to be submitted February, 1968. Final report scheduled for October, 1968. (c) Chilton Research Services, and National Analysts, Inc., under sponsorship of Highway Research Board. (d) None.

Problem. Collect reliable information on public attitudes and behavior related to transportation to find a way to predict what share of the nation's future resources should be allocated to highways as sociological, psychological, economic and leisure-time values change.

Method. Each agency will conduct an independent nationwide survey based on an area probability sample of 2,500 households to determine why people prefer to travel by car or choose some other mode of transportation; how much they are using different types of transportation; what importance they attach to various modes; and what they think about the way transportation is financed. The investigators will try to determine if present procedures for allocating resources for highways are responsive to public attitudes; probe into the relationships between attitudes and the personal characteristics of the people interviewed, transportation and community values, transportation needs and recorded behavior. (DHB)

214. HIGHWAY RESEARCH AND URBAN TRANSPORTATION PLANNING IN OTHER COUNTRIES

(a) See below. (b) Completed and published under the above title as Highway Research Record No. 169. Available from Highway Research Board, Publications Department 805, 2101 Constitution Avenue, N. W., Washington, D. C. 20418. 36 pp. \$1.20 per copy. (c) Highway Research Board. (d) None.

Problem. The report presents four papers which give an overview of some of the most recent worldwide transportation research.

In the first paper, Robert O. Swain catalogs and compares research being done in 19 countries, an early report of the worldwide inventory of current road research being conducted by the International Road Federa-

tion. He observes that in general, the type of highway and traffic research conducted in a country corresponds to the sophistication of its highway system. Studies of soils, foundations, and earth mechanics are popular in countries where the highway system is still in its early stages of development. Traffic and safety, on the other hand, are more likely to receive the attention of researchers in countries with well-developed systems. The largest single subject being studied is bridge design. But in the United States, the number one research activity is cement and concrete; bridge design and highway safety are both in second place, and general materials comes next.

In the second paper, Gordon D. Campbell discusses the Canadian Good Roads Association's efforts to identify the strategy of research administration in Canada by correlating and reporting on research being conducted by some 78 organizations. During 1966, an estimated \$2.4 million was spent on road research in Canada, with 366 individual projects reported.

In the third paper, R. J. Smeed outlines his statistical method for determining and comparing the capacities of the city center for different types of road and routing systems. He applies the formula to 18 towns in Great Britain and 12 in other countries.

In the last paper, Masao Yamada discusses renewal planning in transportation in Tokyo, pointing out that a population of eleven million situated on a 1,200 square-mile area necessitates the optimum restructuring of land uses. Among the innovations he discusses is the multipurpose use of expressway rights-of-way--an idea being considered in the United States. (DHB)

215. LAND USE REQUIREMENTS OF URBAN TRANSPORTATION SYSTEMS, AND THE IMPACTS OF SYSTEM CHARACTERISTICS UPON TRAVERSED URBAN ENVIRONMENTS

(a) George W. Barton, Frederick T. Aschman, Rodney E. Engelen, Stephen R. Alderson, Salvatore V. Ferrera, Edward A. Handy, George L. Majoros, William T. W. Kwan, George L. Peterson, and Marilyn F. Tschannen. (b) In process. A preliminary report has been submitted to the sponsoring agency.

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Final report scheduled for May 31, 1968. In addition, eight to fifteen specialized papers will be prepared (internally by the contractor) covering in greater detail some of the many interrelationships between urban transportation and urban development. The topics and problem areas of these monographs will complement and be integrated with the principal study. (c) Barton-Aschman Associates, Inc., under sponsorship of U. S. Department of Housing and Urban Development, Urban Transportation Administration. (d) None.

Problem. Investigate urban transportation problems from broad assessment of urban land uses and urban environmental characteristics as they relate to the origins, destinations, and characteristics of urban transportation systems. Attention will be given to both adjacent and connecting routes of different transportation modes, as they affect land use and urban development patterns. Urban transportation is inseparable from urban location. Poor spatial distribution of urban activities and land uses increases urban personal travel demand; sound planning and location of urban activities and land uses enables location to substitute for transportation.

Method. (1) Develop specifications for recommended research projects which will identify and, where possible, measure the impacts of urban transportation upon areas; (2) analyze transportation system impacts upon traversed urban areas, including specific cases in actual cities of diverse sizes and patterns; (3) recommend different land use patterns which will maximize the social and economic benefits of new systems of urban transportation; and (4) describe and evaluate alternative procedural and administrative techniques which may be used to coordinate urban transportation planning with urban development planning and land use zoning. (EAH)

216. ORGANIZATION AND ADMINISTRATION OF THE TRANSPORTATION PLANNING PROCESS

(a) R. Hansen. (b) In process. A procedural manual is to be compiled upon completion. (c) Purdue University, Graduate School, and Indiana State Highway Commission, under sponsorship of Indiana State Highway Com-

mission and U. S. Department of Commerce, Bureau of Public Roads. (d) None.

Problem. Study the development of procedures suitable for a transportation planning program for smaller cities, categorized by size. In particular, methodology, techniques, and resource and time requirements will be studied, and a network scheduling procedure outlined. (JS)

217. CIRCULATION PLANNING FOR COMMUNITIES

(a) Not reported. (b) In process. Preliminary draft of manual to be completed in early 1968. Publication of final report expected later in 1968. (c) Victor Gruen Associates, under sponsorship of Automobile Manufacturers Association. (d) None.

Problem. Prepare a working manual covering development of modern traffic circulation networks for new communities, explaining safety benefits and other planning goals. (HM)

218. A REVIEW OF TRANSPORTATION ASPECTS OF LAND-USE CONTROL

(a) Harold Marks and Salem Spitz. (b) Completed and published under the above title as NCHRP Report No. 31. Available from the Highway Research Board, Publications Department 805, 2101 Constitution Avenue, N. W., Washington, D. C. 20418. 41 pp. \$2.00 per copy. (c) Victor Gruen Associates, under sponsorship of Highway Research Board. (d) 13:1-95.

Problem. Study the transportation aspects of land use controls.

Method. A literature search and canvass of selected highway departments, university researchers, and other agencies involved in transportation planning.

Findings. While the physical urban structure--the physiography, major public activity centers, and the transportation system--changes slowly and gives shape to the area, land use is relatively dynamic and ultimately reflects the market place. The transportation system must, therefore, ultimately accommodate

unpredictable future land uses. Controlling land use has both positive and negative applications; it can effectuate a desired land use plan, reflecting given community objectives, or used to prevent hazards to the public health, welfare, and safety. Zoning, the most commonly known land use control, has only limited value in providing stable development practices, and actually is an uncommon device in many areas of the country. A 1963 study showed that only 17 percent of all counties in the U. S. had adopted zoning ordinances. Even fewer counties were found to have any long-range land use plans. A "general plan" outlining the future needs of the community is a more positive approach to land use control. It can reflect dynamic and changing land uses in predicting future transportation needs. Zoning, outright acquisition of land, contractual agreements with property owners and nuisance regulations are all means of implementing a general plan. Two other techniques can greatly affect the relationship of land use to the highway--geometric design of the highway and access control.

The report also discusses highway functional classification, access controls, and design controls, pointing out the necessity of providing different types of roads and streets in proper combinations. Several aspects of the relationship between land use and traffic generation are discussed. Finally, 24 study areas within the research topic that deserve further investigation are listed. (DHB)

Transportation--Highways--Planning
and Design

219. HIGHWAYS AND ENVIRONMENTAL QUALITY

(a) See below. (b) Completed and published under the above title as Highway Research Record No. 182. Available from the Highway Research Board, Publications Department 805, 2101 Constitution Avenue, N. W., Washington, D. C. 20418. 38 pp. \$1.60 per copy. (c) Highway Research Board. (d) None.

Problem. The publication presents six studies of the economic benefits that come from beautifying highways.

In one paper, Paul Davidson (Rutgers University, Bureau of Economic Research) deals directly with attempts to estimate social and economic benefits from the scenic enhancement of highways.

In another paper, Christopher Tunnard (Yale University, Department of City Planning) points out the constraints on roadside beautification imposed by high-speed travel. The older type of roadway, where stately rows of trees grow close to the pavement, is pleasing for leisurely driving, but unsafe at today's speed. The kind of landscape that drivers can view with the least danger is the distant panorama.

Norman Williams, Jr. (Rutgers School of Law) discusses the legal tools now available to implement beautification programs. Many courts now recognize aesthetics as a proper goal of land use regulation. But the main problem remains--how to define adequate standards and rules of law to guide regulatory power when applied to aesthetics. The courts are now emphasizing the interrelationship of aesthetic and economic factors, especially in areas where tourism is important.

David R. Godschalk (Florida State University, Department of Urban and Regional Planning) raises several questions about the financial costs and the political feasibility of the Federal Highway Beautification Act of 1965 and suggests that total highway route planning at the federal-state level will permit the use of systems techniques for information and beautification programs. Advertising zones, for instance, could be rationally determined according to the need for motorist information and the conservation of natural beauty rather than haphazard local zoning.

In their papers, Thomas J. Norton (University of Washington, Department of Urban Planning) and George L. Peterson (Northwestern University, Department of Civil Engineering) try to establish criteria for discriminating between what is and what isn't aesthetically pleasing by more objective means than those employed in the past. (DHB)

220. HIGHWAY CORRIDOR PLANNING AND LAND
ACQUISITION

(a) Philip Lewis, J. H. Beuscher, David R. Levin, Bamford Frankland, E. Wilson Campbell, John B. Metheny, E. R. Lorens, Jon R. Kerian, and Nicholas M. Margetis. (b) Completed and published under the above title as Highway Research Record No. 166. Available from the Highway Research Board, Publications Department 805, 2101 Constitution Avenue, N. W.,

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Washington, D. C. 20418. 76 pp.
\$2.40 per copy. (c) Highway Research Board. (d) None.

Problem. The study consists of nine papers reporting some of the first experiences in using the concept of the "highway corridor" (a highway and its surroundings) in various state highway programs in the nation. The publication includes: two papers discussing the concept itself and the legal tools to implement it; three papers describing application of the concept to scenic corridors, urban corridors, and transportation corridors; and four papers that describe the legal and appraisal problems of eliminating roadside advertising signs and junkyards and acquiring "scenic easements." (DHB)

221. GUIDELINES FOR DECIDING DEGREE OF ACCESS CONTROL ON MAJOR ROADWAYS

(a) Vergil G. Stover and William G. Adkins. (b) In process. (c) Texas A. & M. University, Research Foundation, under sponsorship of Highway Research Board. (d) None.

Problem. To establish a systematic way to determine the degree of access control needed on the nation's major highways. The investigators will set up guidelines for the spacing, design, and location of access facilities, and the control measures and devices most suitable for different types of highways to help highway administrators decide how much access to a highway can be controlled without impeding motorist use of stores, plants, and terminals along the highway. Traffic moves faster, more efficiently, and with greater safety on highways with the fewest number of at-grade intersections and median crossings. The needs of road user and nonuser alike will be considered, including the interests of businesses, industries, and transport terminals adjacent to highways and affected by location of exit and entrance ramps. How access control changes affect the land uses around the highway, and how any subsequent changes in land use would, in turn, affect traffic volumes and movements, will be considered. Other factors to be examined are: accident frequency and severity, cost of physical construction and right-of-way, legal considerations, local traffic patterns, service to highway user, and property values. (DHB)

222. WARRANTS FOR HIGHWAY--HIGHWAY GRADE SEPARATIONS AND INTERCHANGES

(a) D. S. Berry, G. T. Satterly, Jr., and J. H. Shortreed. (b) In process. Preliminary findings reported in G. T. Satterly, Jr. and D. S. Berry, "Spacing of Interchanges and Grade Separations on Urban Freeways," Highway Research Record No. 172, 1967, Highway Research Board. (See Item 224.) (c) Northwestern University, College of Engineering, under sponsorship of Illinois Division of Highways and U. S. Department of Transportation, Federal Highway Administration. (d) None.

Problem. Develop a set of procedural guides for the location of grade separations and interchange facilities in urban, suburban, and rural areas.

Method. (1) Prepare a bibliography and evaluation of the state of the art; (2) describe past and present Illinois practice; (3) formulate a theoretical model for the spacing and location of grade separations, interchanges, and at-grade intersections using a systems approach (costs of time accidents, construction, vehicle operation, and right-of-way considered by sensitivity analysis); (4) test the model with field data and case studies; and (5) formulate a functional classification model for a state highway network. (DSB)

223. GEOMETRIC ASPECTS OF HIGHWAYS

(a) See below. (b) Completed and published under above title as Highway Research Record No. 162. Available from the Highway Research Board, Publications Department 805, 2101 Constitution Avenue, N. W., Washington, D. C. 20418. 145 pp. \$3.00 per copy. (c) Highway Research Board. (d) None.

Problem. The study presents five papers dealing with different geometric aspects of highways.

In the first paper, W. R. Bellis (New Jersey State Highway Department) concludes in a study of accident rates that a positive way to cut down on automobile accidents, injuries, and fatalities is to convert state highways to roads that meet freeway design standards.

In the ten years after the toll road system was first opened in New Jersey, neither the accidents, injuries, nor fatalities for each mile driven had increased. On the state system, all three rates had risen and other roads in the state showed an even higher accident rate increase, though not a greater injury or fatality rate increase. The crucial factor is a maximum of "marginal friction." Parades, block dances, baseball games along the edge of the road, junk yards, and such are permitted. The toll-road system is freer of this friction. It is fenced to discourage animals and people from crossing the roadways, there are no driveways, there are no roads intersecting except under well designed conditions.

In the second paper, John W. Hutchinson (University of Kentucky) and Thomas W. Kennedy (University of Texas) discuss safety considerations in median design.

The third paper, by Donald R. Drew, Charles J. Keese (Texas Transportation Institute), and Conrad L. Dudek (U. S. Bureau of Public Roads), discusses freeway level of service as described by an energy acceleration noise model, a means to mathematically relate the number of vehicles on a road with the comfort and convenience of driving.

Vasant H. Surti (The Catholic University) is author of the fourth paper, the relationships of vehicle classifications and geometric characteristics to peak period freeway volumes, a study primarily concerned with finding a way to determine how many vehicles use a particular freeway during the busiest part of rush-hour traffic. A mathematical method (a linear multiple regression model) was developed that would make it possible to predict the total volume of traffic on a freeway from information gathered on only one lane.

The final paper, by Max R. Cheeseman and William T. Voss (South Dakota Department of Highways), presents an interstate highway shoulder use study conducted in South Dakota. (DHB)

2101 Constitution Avenue, N. W.,
Washington, D. C. 20418. 93 pp.
\$3.00 per copy. (c) Highway Research
Board. (d) None.

Problem. The study presents four papers dealing with geometric highway design.

In the first, Bob L. Smith (Kansas State University) and Rodney D. Fogo (Kansas Turnpike Authority) show with pictures and diagrams how engineers can avoid "visual discontinuities" in roadway design, laying heavy emphasis on the relationships between vertical dips and horizontal curves in the highway itself; showing how highways that flow with the natural contours of the terrain with a minimum of sudden change in alignment or grade, produce the most pleasing effect; how highways can be routed to open interesting and easily seen vistas for the driver.

In the second paper, Frank R. Berry (DeLeuw, Carther and Company of Canada, Ltd.) and E. J. McCabe (Ontario Department of Highways) describe and discuss applications of two types of highway models that would help the highway designer visualize his own concept in three dimensions and present his ideas to others.

The author of the third paper, Donald R. Drew (Texas Transportation Institute of Texas A. & M. University), describes a new application of freeway "reverse-flow" operations, which refers to the practice of reversing traffic on the freeway's normally opposing lanes to carry heavy traffic during peak hours, and suggests some interchange designs that enable ingress and egress directly to and from the at-grade street system rather than the outside freeway roadways.

In the final paper, G. T. Satterly, Jr. (University of Michigan) and D. S. Berry (Northwestern University) report upon their research on spacing of interchanges and grade separations on urban freeways. (See Item 222 above for report on this last project.) (DHG)

224. GEOMETRIC HIGHWAY DESIGN

(a) See below. (b) Completed and published under the above title as Highway Research Record No. 172. Available from the Highway Research Board, Publications Department 805,

225. INTERCITY HIGHWAY TRAVEL

(a) Not reported. (b) In process. (c) Portland Cement Association and Wilbur Smith and Associates, under sponsorship of Portland Cement Association. (d) None.

LAND USE AND TRANSPORTATION

Problem. Mathematical models to project highway travel to the year 2000 are being used in examining travel between 3,000 selected North American urban centers. (SIE)

(d) None.

Problem. Define the mobility behavior and development needs of special urban groups (i.e., elderly, poor, handicapped, young) and devise experiments and studies to further increase knowledge of latent and potential needs for urban personal travel. (LAH)

226. ORIGIN AND DESTINATION--ADVANCES IN TRANSPORTATION PLANNING

(a) See below. (b) Completed and published under above title as Highway Research Record No. 165. Available from the Highway Research Board, Publications Department 805, 2101 Constitution Avenue, N. W., Washington, D. C. 20418. 128 pp. \$2.60 per copy. (c) Highway Research Board. (d) None.

Problem. The study is composed of eight reports concerned with uses of origin and destination data. Four of the papers deal directly with mathematical modeling problems. The others discuss the study of freight movements, land use linkages, estimating traffic volume, and manufacturing trip-generation data. The reports and their authors are: Earl R. Ruiter, Improvements in Understanding, Calibrating and Applying the Opportunity Model; W. Stearns Casewell, Effect of Zonal Interchange Calculations Based on the Opportunity Model in a Heterogeneous Region; Anthony R. Tomazinis, Modal Split Model in the Penn-Jersey Transportation Study Area; David E. Boyce, Effect of Trip Direction on Interzonal Trip Volumes: Test of a Basic Assumption of Trip Distribution Models; Robert T. Wood, Tri-State Transportation Commission's Freight Study Program; Frank E. Horton and Paul Shuldiner, The Analysis of Land-Use Linkages; Morton Schneider, Direct Estimation of Traffic Volume at a Point; and Michael Koliffrath and Paul Shuldiner, Covariance Analysis of Manufacturing Trip Generation. (DHB)

228. TRANSPORTATION NETWORK STUDIES

(a) Donald Hill. (b) In process. (c) Traffic Research Corporation, under sponsorship of U. S. Department of Commerce, National Bureau of Standards. (d) None.

Problem. Provide specific data inputs and calibrated models of travel behavior for use in National Bureau of Standards simulation models of traffic flow in order to: (1) develop a modal split model for allocating traveler according to time, cost, and convenience preferences; (2) characterize the intracity travel of intercity trips by time, cost, and convenience; (3) develop a computer program for automatic coding of characteristics of transportation networks.

Method. Use discriminant function analysis for developing a modal allocation model, and calibrate the model with existing data (California Survey) and with data developed for the northeast corridor. Similarly, intracity access relationships will be developed and calibrated for providing access times and costs for all of the terminals in the northeast corridor network. Exploratory work is being conducted for a feasibility study of an autocoder for the Northeast Corridor Simulation using the Pennsylvania-Jersey Autocoder as a basis for comparison. (SIE)

227. LATENT DEMAND FOR URBAN PERSONAL TRANSPORTATION TO SATISFY URBAN AND SOCIAL NEEDS UNMET BY EXISTING SYSTEMS

(a) Lester A. Hoel, Eugene D. Perle, and Karl Kinsky. (b) Completion expected June, 1968. Findings to be published subsequent to approval by sponsor, possibly as an Institute report. (c) Carnegie-Mellon University, Transportation Research Institute, under sponsorship of U. S. Department of Housing and Urban Development.

229. MICRO-ASSIGNMENT

(a) John R. Hamburg. (b) Feasibility study completed; implementation phase involving continued research, development of computer program, and documentation in process. (c) Creighton, Hamburg, Incorporated, under sponsorship of U. S. Department of Transportation, Federal Highway Administration. (d) None.

Problem. Develop a micro-assignment model. This concept grew out of the difficulties of applying conventional region-wide assignment results to specific facility design problems and small area analyses. Conventional traffic simulation and assignment often produced answers not sufficiently detailed or accurate.

Method. The micro-area is small, such as a central business district, a large institution, or even a small town. In addition, a buffer-area surrounding the micro-area is necessary to handle possible traffic diversion into and out of the micro-area. Cordon stations are located at each intersection of a micro- or buffer-area facility with the external boundary of the buffer-area. All travel is collapsed to a zone to zone matrix consisting of zones (blocks or block faces) in the micro-area, zones in the buffer-area, and cordon line stations. Within the micro-area, the network detail would be extensive and include a pedestrian network connecting parking locations with activity locations. All one-way and all turning movements would be recorded. Trips would be assigned in small increments of time using the concept of a trip destination time profile. This would be empirically determined for each trip class. Alternatively, experimental profiles could be used to measure their effect on traffic flow. The length of the time interval might vary in response to network congestion. Vehicles would be assigned from parking locations within the micro and buffer-areas and from cordon stations. Interchanges between activity locations and parking locations would be calculated separately using a parking model and pedestrian network or optionally by an approximation which avoids details of pedestrians and parking fees. Vehicles would be moved along minimum cost paths with network costs revised following each incremental assignment. Vehicular densities would be retained by link, and speeds would reflect signal timing, turning movements, link vehicle densities, parking, and queuing. (RSS)

230. SYSTEM EVALUATION BY THE SIMPLIFIED PROPORTIONAL ASSIGNMENT TECHNIQUE

(a) H. Ayad and J. C. Oppenlander.
(b) Completed. (c) Purdue University and Indiana State Highway Commission, under sponsorship of Indiana State Highway Commission and U. S. Department of Transportation, Federal Highway Administration. (d) None.

ment of Transportation, Federal Highway Administration. (d) None.

Problem. Develop a rational concept for the evaluation of urban transportation systems. The adequacy of a plan is described as the degree to which its design features satisfy the study objectives, the attainment of selected levels of service between pairs of urban zones. A plan is considered adequate when the transportation facilities accommodate to a reasonable degree the traffic movements at these desired service levels.

Findings. A desire assignment procedure is employed to determine the nature, magnitude and location of deficiencies on a transportation system. Trip interchanges are assigned on a proportional basis only to acceptable routes that satisfy the pre-set levels of service. The assignment technique results in the detection of link and zonal deficiencies. Link deficiencies occur when the loads on street segments exceed the ability of these sections to provide a desired quality of traffic flow. If no acceptable route exists between a zonal pair, a zonal deficiency results, and trip interchanges can be accommodated only by improvements on the system. Link and zonal deficiencies define the nature and the extent of the improvements needed to make a plan adequate.

The new concept is identified as the Simplified Proportional Assignment Technique (SPAT). The various components of this technique were formulated and the associated parameters quantified. A computer program was prepared to develop this technique into an operational format. The application of the process to transportation networks was demonstrated and analyzed for two cities differing in size and characteristics. (JCO)

231. ANALYSIS OF TRAVEL DISTRIBUTION METHODOLOGY

(a) G. A. Shunk and W. L. Grecco. (b) In process. (c) Purdue University, School of Engineering, and Indiana State Highway Commission, under sponsorship of Indiana State Highway Commission and U. S. Department of Transportation, Federal Highway Administration. (d) None.

Problem. Analyze formulation and application of current trip distribution techniques, concentrating on gravity and opportunity

concepts parameters. How these vary with socioeconomic measures of the respective study zones of the Indianapolis urban area will be determined to aid the finding of parameters in other urban areas and prediction of future travel patterns. The project will test the sensitivity of the resulting distribution to manipulation of the parameters to better define the accuracy with which data must be collected; test variations in the formulation and application of the models in order to isolate particular characteristics of their operation which can be modified to improve accuracy and increase efficiency or to point the way to a revision in basic theory. This work will guide modification of current models or use of less sophisticated formulations in transportation planning in smaller urban areas. (JS)

232. MOVEMENT OF GOODS

(a) C. Graeb. (b) Completed and published as Goods Movements Cost Savings. (c) District of Columbia, Department of Highways and Traffic, under sponsorship of U. S. Department of Transportation, Federal Highway Administration. (d) None.

Problem. To determine the benefits of an improved highway system on the movement of goods in an urban area. (JS)

233. PARKING

(a) See below. (b) Completed and published under the above title as Highway Research Record No. 168. Available from the Highway Research Board, Publications Department 805, 2101 Constitution Avenue, N. W., Washington, D. C. 20418. 52 pp. \$1.60 per copy. (c) Highway Research Board. (d) None.

Problem. The study presents two papers concerned with parking.

In the first, Allan Goodwin (Orange County Community College) considers the methods for estimating parking demand in small cities, those under 50,000. He describes a study of the parking "mix" including all the factors and elements that go into meeting a city's parking needs--the absence or presence of parking meters and/or curb facilities,

provision of public and private off-street parking lots, varied time limits, rate or fee structures, and traffic regulation and control. The investigator enumerates the characteristics of small cities that make their parking problems different from those in large cities.

In the second paper, Charles A. Culp (U. S. Bureau of Public Roads) deals with the problems of establishing and operating municipal facilities. He compiles the results of studies done by other researchers of cities around the country. The report catalogs the revenue sources available for financing parking facilities in various states; describes model examples of how cities have acquired funds and set up administration of parking facilities under existing municipal departments; reviews statutory provisions and court decisions concerning acquisition of parking facilities and rates and regulations in facilities leased for operation; outlines the matters that legislatures must consider in drafting comprehensive parking laws for municipal provision of facilities; and discusses the autonomous parking agency, its advantages, and how it should be established. (DHB)

234. COMPREHENSIVE STUDY OF OREGON'S HIGHWAY NEEDS AND FINANCING

(a) Not reported. (b) In process. (c) Oregon State University, Agricultural Experiment Station, under sponsorship of State of Oregon. (d) None.

Problem. (1) Develop standard design criteria, acceptable to all public agencies involved, for evaluation of needs over time in terms of primary function of the road, volume of traffic, speed, and safety; (2) determine the needs of Oregon's highways; (3) determine proper share of road cost which should be borne by adjacent property owner, road user, and general community; (4) develop user costs in terms of use classes and determine proper percentage share of costs that should be borne by each class of user; (5) develop a procedural allocation of state highway funds, considering the relationship of each class of user, to provide for both equity and growth; (6) consider the question of jurisdictional responsibility and provide definition to the jurisdictional problems as an aid to legislative action where problems exist. (JS)

Transportation--Highways--Impact Studies

235. TRANSPORT SYSTEMS--IMPACT AND DEVELOPMENT

- (a) R. D. Pashek and T. D. Larson.
(b) In process. (c) Pennsylvania State University, College of Engineering. (d) None.

Problem. Develop a rational method for studying the impact of transportation system changes on a broad areal basis.

Method. The investigators are currently working on: (1) development of conceptual framework; (2) comparison of Pennsylvania and federal laws on transportation; and (3) a civil aviation--regional development plan. (SIE)

236. THE ECONOMIC AND SOCIAL IMPACT OF INTERSTATE HIGHWAYS IN THE EMPLOYMENT AND RETAIL MARKETS SERVED BY THE BIRMINGHAM AREA

- (a) C. T. Moore. (b) In process.
(c) Alabama University, College of Engineering, under sponsorship of Alabama State Highway Department and the U. S. Department of Transportation, Federal Highway Administration. (d) None.

Problem. To assimilate and analyze field and other indicator data presently available for anticipating the regional economic and social effect of the completed interstate highway system on a metropolitan area such as Birmingham.

Previous Relevant Research. The project is sequent to one which employed localized data of various kinds to blanket the trade area.

Method. The study utilizes data from a north-south corridor ten miles in width and about 100 miles in length, designed to show not only influences of interstate highways along the routes but trends in shifting of populations, businesses, and institutions within the areas, far back and between these highways. (SIE)

237. ECONOMIC IMPACT OF THE INTERSTATE HIGHWAY SYSTEM ON LOCAL AREAS IN TEXAS

- (a) J. L. Buffington. (b) In process.
(c) Texas A. & M. University, Texas Transportation Institute, under sponsorship of Texas Highway Department and U. S. Department of Transportation, Federal Highway Administration. (d) None.

Problem. Identify and classify the major effects that the interstate system has on local areas and relate these effects to specific features of the different areas. The major effects studies are: the impact on land values, land uses, business activities, travel habits, and general community development.

Method. The before and after study approach is being used to determine the extent of highway influence. A control area is used with each study area to aid in isolating some of these effects. (SIE)

238. IMPACT OF HIGHWAY IMPROVEMENTS

- (a) F. B. Mendenhall. (b) In process.
Reports available from Joint Highway Research Project, Purdue University.
(c) Indiana State Highway Commission, under sponsorship of Indiana State Highway Commission and U. S. Department of Transportation, Federal Highway Administration. (d) None.

Problem. A before and after study of the social and economic effect of expressway construction in urban areas.

Method. The study is being conducted in Indianapolis, Indiana, over the time of construction of the interstate in that area. The study considers the effect of expressway construction on: (1) persons involved--how many, income, age, race; (2) relocation of persons and businesses--costs, distances; (3) change in communities and their new orientation to the rest of the area. Compilation of assessed valuations and estimated tax income from the tax rolls by these highway construction projects and of property improved as a result of this construction should be investigated. (FBM)

239. CAPITAL BELTWAY ECONOMIC IMPACT STUDY

- (a) Not reported. (b) In process.
(c) Wilbur Smith and Associates,
under sponsorship of Maryland State
Roads Commission and U. S. Department
of Transportation, Federal Highway
Administration. (d) None.

Problem. (1) Compile physical, social, and economic data, providing a basis for delineation of the growth and present conditions of the general area that the capital beltway traverses, and a point of reference for future projections; (2) estimate and project amount, pace, direction, or type of change which the beltway will cause, and the influences it will exert on future growth of the area, with emphasis on problems and potentials it will create, especially in terms of pressures on land use controls; (3) develop procedures and methods for measuring the actual effects and changes which will take place as land is acquired and the beltway constructed so they may be compared with projections of changes to reveal the accuracy of the results, reliability of the techniques, and corrections and improvements which can be made in either; (4) presentation of data, findings, and projections for use by citizens and governments of affected areas and those interested in making similar studies in other communities. (5) presentation of this and additional information for use by those undertaking similar studies. (SIE)

240. STUDY OF LAND USE ADJACENT TO INTERCHANGES

- (a) Not reported. (b) In process.
(c) Utah State Department of Highways,
under sponsorship of Utah State Department of Highways and U. S. Department of Transportation, Federal Highway Administration. (d) None.

Problem. Gather detailed data concerning the present use of lands adjacent to interstate interchanges in order to analyze land development of interchanges and offer recommendations for protection of interchanges.

Method. Studies will be conducted at approximately ten interchange sites located in urban or urban-fringe areas, some with frontage roads and some without. The following information will be developed: (1) land development trends and projections;

- (2) estimates of the traffic impact of future development; (3) evaluation of design alternatives and legal provisions in controlling land development; and (4) land benefit analysis based on trends and projections of land values. (SIE)

Transportation--Highways--Traffic Control

241. SURVEILLANCE METHODS AND WAYS AND MEANS OF COMMUNICATING WITH DRIVERS

- (a) Morton I. Weinberg, Norman J. Deleys, and Richard F. Schneeberger.
(b) Completed and published under the above title as NCHRP Report No. 28. Available from the Highway Research Board, Publications Department 805, 2101 Constitution Avenue, N. W., Washington, D. C. 20418. 66 pp. \$2.60 per copy. Earlier findings reported as NCHRP No. 9. Findings for that part of the study dealing with computer-controlled traffic signal systems for a small city described in NCHRP No. 29. (See Item 243 below.) (c) Cornell University, Aeronautical Laboratory, under sponsorship of the Highway Research Board. (d) None.

Problem. The study examined two types of closed-loop surveillance systems capable of diverting traffic headed for a congested freeway onto alternate routes. The first enlists the aid of a computer to predict travel time on an urban freeway when a breakdown or an accident causes a tie-up in traffic flow with the object of devising an "early warning" system that would provide information to be relayed to motorists to help them find alternative routes. The mathematical logic necessary to predict travel times on an urban freeway where a mishap has caused a breakdown in traffic flow is presented.

The second system uses a television camera borne aloft by a tethered balloon to keep an eye on traffic movements. Information gathered with the cameras would be transmitted to a ground-based control room or recorded on video tape for later study. The investigators studied the effectiveness of broadcasting traffic conditions to motorists from a helicopter or light airplane, an operation used with increasing frequency

over the past decade. The study was made in the Buffalo, New York metropolitan area. Although effective, both helicopter and airplane operations are hazardous to the observers. (JS)

242. IMPROVED TRAFFIC FLOW ON HEAVILY TRAVELED STREETS IN MEDIUM-SIZED CITIES

(a) Wesley LeBaugh and Walter E. Pontier. (b) In process. Findings to be published as reports. A 15- to 20-minute film showing operations conducted during the project and describing results attained, to be prepared. (c) Edwards and Kelcey, under sponsorship of Highway Research Board. (d) None.

Problem. Develop means of boosting the traffic carrying capacity of heavily traveled streets in the nation's medium-sized cities. Past experience has shown that by manipulating such things as traffic signal timing, lane directions, and parking controls, traffic on existing streets can be made to flow faster and smoother. The investigators will study how these techniques can be applied to a city's entire street network. They will incorporate secondary benefits of the traffic improvement program into their objectives, including the smoothness of traffic flow, noise levels, accident rates, convenience, air pollution effects due to excessive need for accelerations and bus transit trip times.

Method. Newark and Louisville (Ky.) are the study cities. Because the methods developed are intended to be applicable to other cities, the study sites were selected to represent different types of urban areas. In both cities, emphasis will be on boosting the capacity of existing streets without widening streets or building new arterials. The investigators will inventory the characteristics of factors affecting traffic flow. After traffic engineering improvements are made, they will try to detect relationships between specific practices and changes in vehicle speeds, volume, queuing at intersections, duration of peak flows, accelerations and decelerations required and route preferences. They will investigate ways to apply the results of the programs to other areas, using mathematical models that simulate a network of city streets. (DHB)

243. DIGITAL-COMPUTER-CONTROLLED TRAFFIC SIGNAL SYSTEM FOR A SMALL CITY

(a) Morton I. Weinberg, Harvey Goldstein Terence J. McDade, and Robert H. Wahline. (b) Completed and published under the above title as NCHRP Report No. 29. Available from Highway Research Board, Publications Department 805, 2101 Constitution Avenue, N. W., Washington, D. C. 20418. 82 pp. \$4.00 per copy. This is a portion of a larger study reported and described in NCHRP Report No. 28. (See Item 241 above.) (c) Cornell University, Aeronautical Laboratory, under sponsorship of Highway Research Board. (d) None.

Problem. Devise a computer-controlled traffic signal system aimed at directing traffic over city streets as efficiently as possible and keeping motorists' intersection delays to a minimum.

Method. This study was a theoretical analysis of the system, using White Plains, New York, as a typical city.

Findings. The report discusses current methods, equipment, requirements, and costs for a computer-controlled signal system, and includes the control logic to be used by the computer in making signal decisions. Under the system, a detector in the pavement would transmit information on the density of traffic to a central computer via voice-grade telephone lines. The high-speed general purpose digital computer would process the information and "decide" if the signal should change. Acceptable criteria for the design and placement of traffic sensing devices are discussed. The report includes an annotated bibliography of previously completed research. (DHB)

244. IMPROVED CRITERIA FOR TRAFFIC SIGNALS AT INDIVIDUAL INTERSECTIONS

(a) D. L. Gerlough and F. A. Wagner. (b) Completed and published under above title as NCHRP Report No. 32. Available from Highway Research Board, Publications Department 805, 2101 Constitution Avenue, N. W., Washington, D. C. 20418. 134 pp. \$5.00 per copy. (c) Planning Research Corporation (Los Angeles), under sponsorship of Highway Research Board. (d) None.

Problem. Develop a traffic simulation model to test and establish improved criteria for traffic signals at individual intersections and devise and test new signal timing concepts.

Method. A new computer model for simulating traffic performance and control at an individual intersection was developed during the early stages of the project. With it, five different control techniques were simulated and the most promising, the basic queue control method, was field-tested at an intersection in the Chicago area.

Findings. The simulation model developed in the study can be readily applied to determine the effectiveness of existing signal timing.

Of the new techniques for timing traffic signals, the most promising was the basic queue control method. The method simply measures the number of cars waiting to get through an intersection, gives them enough green time to pass, and then changes the light to red. Yet it may reduce motorist delays at intersections as effectively as far more complicated and expensive traffic-responsive controllers now in use. It requires unambiguous settings. Computations and commands are simply made one per phase, while existing traffic-responsive controllers must continuously search for an appropriate gap in the line of traffic. These advantages apply to a centralized network of signalized intersections, as well as to the isolated intersections considered in this study.

The investigators also found that for all conditions they tested, multiple-phase signal timing slows down traffic at right angle intersections. The simple two-phase operation (no protected left turns) was increasingly more advantageous as the traffic volume rose. A leading green arrow for left turns at those intersections where a disproportionate number of cars usually make left turns was the only condition tested where the multiple-phase operation came close to matching the two-phase scheme efficiency. Also, research quantitatively confirmed that cycle lengths (time lapse from start of a green phase to start of next one) should be as short as possible. (DHB)

Transportation--Transit

245. FEASIBILITY OF BUS RAPID TRANSIT OPERATIONS ON BUS FREEWAYS USING TRAFFIC SURVEILLANCE AND CONTROL

(a) Vergil G. Stover and Joseph A. Wattleworth. (b) In process. Completion expected June, 1968. Findings to be published as book. (c) Texas A. & M. University, College of Engineering, Texas Transportation Institute, under sponsorship of U. S. Department of Housing and Urban Development. (d) None.

Problem. Determine whether bus rapid transit operations on bus freeways using traffic surveillance and control could provide a partial solution to the problem of moving a large volume of people from existing residential areas to major traffic attractors in highly developed urban areas.

Method. Four urban freeway study sites were selected. Existing freeway operation, surveillance and control data concerning these sites, relative to freeway bus rapid transit operations, was documented. Design criteria for preferential bus operation have been developed and applied to each site. Each site will be evaluated for its probable operation based on the number of buses and private vehicles that may be allowed on the freeway for any desired level of service. Cost estimates have been prepared for any necessary freeway reconstruction as well as for the surveillance and control system. Collected and developed data will be analyzed and the feasibility of bus rapid transit operations through traffic surveillance and control evaluated for the four study sites as well as urban freeways in general. (VGS)

246. POTENTIAL FOR DEVELOPMENT OF AREAS AFFECTED BY A RAPID TRANSIT SYSTEM

(a) Joseph W. Duncan, Victor P. Carter, Harold Goldstein, John Hagely, Chuck Kimm, Edward Laitila, Gordon Milde, Bob Toepfer, and Bill Vigrass. (b) In process. (c) Battelle Memorial Institute, Urban Studies Center, under sponsorship of City of Cleveland Heights. (d) None.

Problem. A multi-disciplinary study to determine the feasibility of extending the

Cleveland Transit System into and through Cleveland Heights, a suburb adjacent to Cleveland on the east.

Method. (1) Investigate the economic justification and actual design of the transit line, its stations, and parking facilities. (2) Examine two study areas in Cleveland Heights adjoining the transit line for redevelopment potential. The redevelopment might consist of rehabilitating and landscaping the existing area, or include development of a new high-rise residential, retail, or recreational center. Community goals will be considered. (3) Consider the socioeconomic effects of the development on the rest of the community. (HG)

247. TRANSIT EXPRESSWAY REPORT

(a) Richard S. Rhodes. (b) Completed and published February, 1967, by the MPC Corporation. Copies available from the Port Authority of Allegheny County, 121 7th Street, Pittsburgh, Pennsylvania 15222. 50 pp. (c) Port Authority of Allegheny County, under sponsorship of U. S. Department of Housing and Urban Development. (d) None.

Problem. To test and evaluate a unique system of rapid transit, the Transit Expressway, in South Park, Allegheny County, Pennsylvania. The testing and evaluation program was designed to determine the engineering, operating, and economic feasibility, and public acceptance of Transit Expressway.

Findings. The South Park pilot project is a successful demonstration of an innovative rapid transit system designed for medium population density metropolitan areas. Further demonstration appears to be warranted. The development of the Transit Expressway should be continued in order to bring the technology to the state of refinement which will permit preparation of manufacturing specifications for a reliable, passenger carrying, revenue producing, and economical commercial system. (ML)

248. THE RADIAL EXPRESS AND SUBURBAN CROSSTOWN BUS RIDES

(a) William P. Hamilton III. (b) Completed and published in 1966 by Agency. (c) A Mass Transportation

Demonstration Project by the Department of Housing and Urban Development and the Bi-State Development Agency of the Missouri-Illinois Metropolitan District, St. Louis Metropolitan Area. (d) None.

Problem. To determine the criteria which influence the patronage of express bus operations and to test the feasibility of a cross-county bus route serving commercial centers developing outside the central city area.

Method. Operation for a one-year period of seven new radial express bus routes, and a new local cross-county route. Data collection through a Home Interview survey of approximately 8,000 interviews, an "on-the-bus" rider survey of approximately 1,200 interviews, and special surveys, including surveys of residential areas, business areas, evaluation of operational data and growth patterns.

Findings. The factors that make for the success or failure of the individual route are: (1) resident population, (2) ease of access from residence to bus stop; (3) presence of competitive service; (4) extent of outlying employment; and (5) proximity of passenger's residence to the bus route. (ML)

Transportation--Other

249. AIR CUSHION VEHICLE

(a) John L. Lambert. (b) Completed and published April, 1967, by Agency. 72 pp. (c) Mass transportation Demonstration Project, sponsored and administered by the Port of Oakland, financed by the U. S. Department of Housing and Urban Development. (d) None.

Problem. To determine the operational and economic feasibility and public acceptance of using air cushion vehicles to provide convenient airport access and public transportation in metropolitan areas, and evaluate the air cushion vehicle in general.

Findings. Findings were categorized according to operational feasibility, economic feasibility, and passenger acceptance. It was found that where service was primarily over water, it was operationally feasible. Economic feasibility was difficult to measure,

but it was found that the air cushion vehicle could be used only in special applications, such as on short, point to point routes, over relatively calm water, connecting points generating large volumes of passengers who are willing to pay a premium fare, and for which alternative routes are more lengthy and time consuming. Passenger acceptance would result only if service were convenient, reliable, and reasonably priced. (ML)

250. FREIGHT TRANSPORTATION AND URBAN ECONOMIC GROWTH

- (a) Not reported. (b) In process.
(c) Wilbur Smith and Associates, under sponsorship of Automobile Manufacturers Association. (d) None.

Problem. Develop urban freight transportation planning guides and analyze impact of goods movement on urban economics. (SIE)

251. FREIGHT TRANSPORTATION ECONOMICS

- (a) See below. (b) Completed and published under above title as Highway Research Record No. 175. Available from the Highway Research Board, Publications Department 805, 2101 Constitution Avenue, N. W., Washington, D. C. 20418. 32 pp. \$1.20 per copy.
(c) Highway Research Board. (d) None.

Problem. The publication includes four reports concerned with the economics of freight transportation.

In the first report, Donald E. Church (Transportation Division, Bureau of Census), focuses attention on the relationship between highway-carrier share of freight shipped in this country and the three traffic characteristics of commodity, size of shipment, and distance carried.

The second paper, Walter F. Buhl (Transportation Division, Bureau of Census), discusses the inverse relationship between size of manufacturing plant and the share of freight shipped over highways, pointing out that the relationships described between plant size and transport requirements could be used for long-range planning. The two papers show that manufacturers rely much more heavily on motor carriers to ship freight over short distances than long ones, and

that the smaller the plant the more likely it is that highways will carry its outbound goods.

The third paper, Hoy A. Richards (Texas Transportation Institute) and James D. Jones, Jr. (Southern Minerals Corporation), describes the design of the Southwest Region Continuous Traffic Study, a study initiated to obtain reliable commodity flow statistics within and between the Southwest and other geographic regions of the United States; discusses the techniques for collecting and computing the statistics; and suggests modifications that would make the study applicable to other geographic regions.

In the fourth paper, Frank A. Smith (Transportation Association of America), tabulates the transportation share of Gross National Product to help define the role of the overall transportation function on the U. S. economy and compare the relative role of different modes. The dollars spent on transportation amounted to nearly 20 percent of the nation's GNP in 1964, with 16.3 percent spent for highway travel. (DHB)

VI. GOVERNMENT

Organization

252. A STUDY OF AMERICAN STATES

- (a) Terry Sanford. (b) Completed and published under the title, Storm Over The States, McGraw-Hill Book Co. 218 pp. \$5.95 per copy. (c) Duke University, under sponsorship of Ford Foundation and the Carnegie Corporation. (d) 13:1-90.

Problem. Study the future role of state government in the federal system to determine: (1) how the states can exercise their responsibilities more effectively and efficiently, and (2) the proper relationship of the states to each other and to the federal government.

Findings. Unless America moves swiftly to revitalize the role of the states in our whole federal system, the states may be weakened to the point of endangering the federal system, itself. In discussing the immediate needs for state action, the study reports: (1) the challenge of the urban areas must be accepted by the states--each should develop a department or agency for

urban affairs; (2) the state, from its pivotal position in the federal system, must serve as coordinator, stimulator, representative, protector, and adviser for local governments in their relationships with the national government; (3) the states must free local governments from the thicket of unworkable and out-of-date restraints on administrative structure, annexation, program activities, and personnel; from unworkable restraints on their financial structure.

To give the states more specific channels in the national administration, the report recommends that Congress establish a mechanism of government to function at the highest level of the executive branch, with sufficient presidential authority, to work daily to reduce conflicts, duplication, and confusion, and to exercise continuing initiative to reach the goals defined for intergovernment relations.

Concerning fiscal matters, the study reports: (1) the states must get their tax houses in order; (2) Congress should enact the so-called income tax credit plan (federal income tax taxpayers be allowed to claim a substantial percentage of their state income tax payments as a credit against their federal income tax liability); (3) the federal government must relax its stringent and multiple requirements for the many grant-in-aid programs, and take steps to consolidate them into fewer, broader grants; (4) Congress should construct a broad tax sharing program based on the federal income tax revenues.

For improving state governments, specific recommendations include: (1) make the governor the chief executive in fact; (2) revise state constitutions; (3) allow governor to have a four-year term and to succeed himself at least once; (4) eliminate the executive committees, state councils, and separately elected executive officers and independent boards and commissions in authority if not in fact; (5) like the President of the United States, each governor should have authority to regroup his executive agencies, subject to legislative veto within a specified period of time; (6) the governor should be the chief budget officer and the chief planner for his state, looking beyond his term of office and providing needed continuity in state government. (SL)

253. MODERNIZING STATE GOVERNMENT

- (a) Robert F. Steadman. (b) Completed and published July, 1967. Available from Committee for Economic Development, 711 Fifth Avenue, New York, New York 10022. \$1.00 per copy.
(c) Committee for Economic Development.
(d) None.

Problem. (1) Describe reasonable requirements for any state government seeking to utilize its major opportunities, and (2) set forth measures for obtaining necessary reforms. The states of the Union face urgent demands for solution of difficult problems. Yet their governments, for the most part, are inadequate.

Findings. The states have failed to come to grips with fundamental economic and social issues largely because of four major handicaps: (1) geographic (boundaries set long ago limit state size and jurisdiction so that rational solutions for some major problems are beyond the reach of any one state); (2) out-moded structures; (3) inadequate use of resources; and (4) political weaknesses.

The basic recommendations to strengthen state governments are: (1) State constitutional revision, repealing limitations that prevent constructive legislative and executive action, clarifying roles and relationships of the three branches of government, permitting thorough modernization of local government in both rural and urban areas, and eliminating matters more appropriate for legislative and executive action. (2) State legislatures should be limited in membership, meet in annual sessions without time limitations for adjournment; committees should be few in number, organized along broad functional lines, and supplied with strong staff support. Public hearings should be held on all major legislation. Legislators should serve four-year terms and receive salaries commensurate with their responsibilities and equal to at least half that of the governor. (3) Governors should become chief executives in fact as well as name, have four-year terms, freedom to seek re-election without restriction as to number of terms, have authority and responsibility for development of long-range plans, program supervision, budgetary preparation and execution, and personnel management; have appointive and removal powers over all major executive department heads. His salary should be at least that

of a member of Congress; chief executives of larger states should receive substantially more. (4) All judicial functions now performed by local courts should be brought into a single state-wide system. Each legislature should have authority to create new courts and abolish existing ones as the need arises, and to provide for the unified administration of the entire system. Judges should be appointed for long terms with levels of judicial compensation sufficient to command respect. (5) Two-party competitions should be deliberately fostered in every state. (6) Interstate cooperation in solving mutual problems should be exploited actively through interstate compacts. (JS)

254. REVISION OF STATE STATUTES AFFECTING LOCAL GOVERNMENT

(a) R. B. Lovelace, Jr. and Frank J. Iuen III. (b) In process. (c) State of Missouri, Office of State and Regional Planning and Community Development, with support from the U. S. Department of Housing and Urban Development. (d) None.

Problem. To update and modernize statutes affecting local government.

Method. (1) Review state statutes and constitutional provisions that create, control, and regulate all forms of local government, with the exception of school districts; (2) develop long-range goals for state-local development and prepare legislative recommendations for the next state General Assembly. (RBL)

255. NEGRO POLITICAL LEADERSHIP IN EAST ST. LOUIS, ILLINOIS

(a) Philip Meranto. (b) In process. (c) Southern Illinois University (Edwardsville), Graduate School, Public Administration and Metropolitan Affairs Program. (d) None.

Problem. Study the characteristics of Negro political leadership in East St. Louis, Illinois, and determine why the Negro majority has not successfully gained political control of the community.

Method. A case study of the 1966 mayoralty election, which pits an all-Negro ticket against a white machine-selected slate, is being prepared. (PM)

256. THE NAIROBI CITY COUNCIL: A STUDY OF AFRICAN LOCAL POLITICS

(a) Herbert H. Werlin. (b) In process. Preliminary findings reported in "Proceedings of the Conference on African Local Institutions and Rural Transformation," Lincoln University, April 20-21, 1967. (c) United Nations Institute for Training and Research, under sponsorship of State University of New York, Research Foundation. (d) None.

Problem. Investigate the problems of running an English-type local government in Africa under the typical conditions of a newly independent African country. (HHW)

257. COMMUNICATION OF LABOR POLICY TO THE MINeworkERS OF ZAMBIA

(a) Robert H. Bates. (b) In process. (c) Massachusetts Institute of Technology, Department of Political Science, under sponsorship of Social Science Research Council. (d) None.

Problem. Determine the factors that inhibit or facilitate the communication of government labor policies to the mineworkers of Zambia, with special emphasis on the mineworkers' union and the political party.

Copper mining is the leading economic sector in Zambia and the maintenance of a high level of copper production is essential to the attainment of Zambia's development goals. However, social, economic, and political factors have rendered the mineworkers unreliable in the copper industry. As a result, the government has elaborated labor policies which it seeks to enforce, particularly in the copper mining industry.

Method. Detect the methods the government attempts to employ in communicating its policies and isolate and examine the factors that inhibit or facilitate their transmission. In particular, examine the role of the mineworkers' union and the party as channels of communication between the governmental elite

and the mineworking population. This information is being gathered through intensive and repeated semi-structured interviews, observation, and documentary research. A sample-survey is also planned. (RHB)

Management

258. AUTOMATION IN STATE GOVERNMENT 1966-67: A SECOND REPORT ON STATUS AND TRENDS

- (a) Not reported. (b) Completed and published under the above title by the Public Administration Service, 1313 E. 60th Street, Chicago, Illinois 60637. 43 pp. \$2.75 per copy. (c) The Public Administration Service and the Council of State Governments. (d) None.

Problem. Survey and report on automated data processing operations in state governments.

Findings. Use of computers for other than routine administrative control is growing rapidly; the impact of new "third generation" ADP equipment is strengthening a trend toward centralized direction and control by state administrations; it costs the states an average of 25 cents per capita of population in machine rentals to process the records maintained on their citizens; the states pay their computer staffs less salary, on the average, than commercial users, but employ larger staffs; as computers get bigger and faster the states call in more and more consultants to advise on usage. Included in the report is a listing of 31 advanced computer applications available among the states on an exchange basis. (DR)

259. ROLE OF THE CHIEF EXECUTIVE AND LINE AND STAFF IN EMPLOYEE TRAINING

- (a) W. Donald Heisel, C. A. Harrell, Edward R. Padgett, and Michael H. Weinberg. (b) In process. (c) University of Cincinnati, Department of Political Science, under sponsorship of International City Managers Association. (d) None.

Problem. Determine appropriate policies with regard to proper assignment of responsibility by a chief executive to line and

staff. Consider whether organizations of varying sizes might need different policies. Consider whether policies suitable for a single-purpose agency or department would also be suitable for a multi-purpose unit such as a city government. (JS)

260. SOCIAL INTERRELATIONSHIPS BETWEEN DISADVANTAGED POPULATIONS AND AGENCIES OF MUNICIPAL GOVERNMENT

- (a) Harold Mendelsohn and David Bayley. (b) In process. (c) University of Denver, School of Communication Arts, under sponsorship of Executive Office of the President, Office of Economic Opportunity. (d) None.

Problem. Conduct social surveys in Denver, Colorado, to determine how various municipal agencies, the police in particular, relate to disadvantaged subpopulations. The surveys will show areas of congruence and incongruence in attitudes and behaviors as they affect social and government interrelationships between the disadvantaged and municipal agencies. These studies are expected to delineate actual problem areas so ameliorative social action based on objectively obtained evidence can be instituted by municipal government in the City of Denver. (JS)

261. LAW ENFORCEMENT RESEARCH

- (a) Robert H. Ellis and Edmund F. Fennessy, Jr. (b) An 18-month program initiated in October, 1966, and in process. Phase I of study completed in early 1967 and findings reported in "The Application of Scientific Techniques to Law Enforcement and Criminal Justice Problems," TRC Report 7331-252. An interim report on the Phase II studies to be prepared in January, 1968. (c) The Travelers Research Center, Inc., as part of "The Environment and Man" program, under sponsorship of The Travelers Corporation. (d) None.

Problem. Study potential applications of science and technology to law enforcement and criminal justice problems. Special attention is being devoted to municipal police problems. Objectives of the first phase studies were to: (1) review the

crime problem in the United States and determine general applicability of scientific and technological methods to problems of law enforcement and criminal justice; (2) identify specific problem areas in law enforcement and criminal justice that are amenable to solution by analytical and statistical techniques; and (3) evaluate the problem areas and applicable techniques, identified in (2) to recommend specific projects for study by TRC, and to develop possible approaches toward solving the selected problems through application of appropriate techniques.

In the second phase, attention is being given to three more specific problems: (1) the application of program budgeting in municipal police agencies; (2) a detailed analysis of municipal police record systems; and (3) the application of statistical techniques to police deployment problems based on an analysis of calls for service.

Method. An extensive search of the literature was made and supplemented by interviews with over 20 law enforcement agencies. Problem areas identified were structured into a large matrix and evaluated against a comprehensive set of criteria.

Major Findings. Scientific techniques have definite applicability to law enforcement problems. Forty-four specific problems have been identified and matched against existing analytical techniques. Twelve of the potential projects identified were selected for more intensive investigation and examined in detail with special attention given to problem definition. Alternative approaches were then suggested for problem solution. (RHE)

262. COMPUTER MODEL FOR POLICE DECISION MAKING

- (a) Carl Ravens, Daniel J. Duffy, Norbert Hauser, and Samuel D. Sherrid.
 (b) In process. (c) City of New York, New York City Police Department. (d) None.

Problem. Develop a mathematical computer model which can simulate the development of police manpower and equipment under various urban conditions; determine which means of development would be best, which factors would be significant and which would have little or no effect. The model will indicate

which police statistics should be developed or refined with the aim of improving police decision making. (JS)

263. ARREST PROCEDURES STUDY

- (a) Not reported. (b) In process.
 (c) Vera Institute of Justice, under sponsorship of City of New York, Police Department. (d) None.

Problem. Study the methods used in arrest procedures, including those used from the time a prisoner is booked until the completion of his court appearance.

Method. Examine: (1) the possibility of having policemen swear out complaints at the station house and having the prisoner presented for arraignment by a police officer permanently assigned to a court for that purpose; (2) the photographing of prisoners at station houses; (3) the feasibility of centrally located detention facilities operated by the Department of Corrections which would relieve the police of custodial care of prisoners; and (4) a quicker, more efficient manner of transporting prisoners. (5) A simple, model complaint form will be developed. Other department forms used in arrest process will be reviewed and, where possible, consolidated with those of the Department of Corrections and the District Attorney's Offices. Cooperation of the courts will be sought in staggering court calendars to reduce waiting time. The Police Department has endorsed recommendations for a 24-hour arraignment of prisoners in the courts. (7) The search of criminal records will be expedited by using a facsimile device to transmit fingerprints to headquarters. (8) The Department's computer system will be expanded to include the entire arrest process. (JS)

264. POLICE-COMMUNITY RELATIONS DEMONSTRATION PROJECT

- (a) Ronald B. Natalie and Howard Greenberg. (b) In process. Completion expected in 1968. (c) Lawyers' Committee for Civil Rights Under Law, under sponsorship of U. S. Department of Justice, Office of Law Enforcement Assistance. (d) None.

Problem. Develop techniques for implementing police-community relations programs and create demonstration projects in individual cities with the view of encouraging efforts in other cities based on the model programs in these three selected communities.

Method. The organized bar will be mobilized to create community support for the program. The Committee staff will work with all elements of the community toward developing an effective community relations effort, given the peculiarities of the local situation. Guidance by the International Association of Chiefs of Police will be used to point out the most likely avenues of success. It is the Committee's intention to serve additional communities in future years. (RBN)

265. APPLICATIONS TO LAW ENFORCEMENT OF TECHNIQUES AND DATA DEVELOPED IN THE 1967 CENSUS PRETEST

- (a) John I. Griffin and James F. Ahern. (b) In process. Completion scheduled for August, 1968. (c) City University of New York, Department of Business, and City of New Haven, Connecticut, Police Department, under sponsorship of U. S. Department of Justice, Office of Law Enforcement Systems. (d) None.

Problem. The Bureau of the Census conducted a full-scale census pretest in the New Haven SMSA in April, 1967, using computerized address directories and geo-coding. This project will evaluate these census data and techniques, as tools for more efficient law enforcement procedures. In particular, complaint, arrest, and traffic records on a block-side basis will be related to the census data. An attempt will be made to advise predictive variables which may be used in allocation of police personnel. Through its National Advisory Committee, this project will explore the applications on a national basis in preparation for the 1970 census. (JIG)

266. POLICE-COMMUNITY RELATIONS PLANNING

- (a) Joseph McAlpine, Biagio DiLieto, and Paul D. Lipsitt. (b) In process. (c) City of New Haven, Police Department, and Boston University, under sponsorship of U. S. Department of

Justice, Office of Law Enforcement Assistance. (d) None.

Problem. Develop long-range strategies for bettering police-civilian communications and relations at the neighborhood level. By exploring problems of mutual concern to the police and community, misunderstandings and distortions which have arisen can be reduced and constructive action taken.

Method. A project coordinator, assistant coordinator, and ten regular police officers will engage regularly in group discussions with neighborhood groups, organizations, and public agency representatives. These sessions will be evaluated both through self-reporting by the group members and observer reports. Changes will be noted as the sessions progress. Curriculum materials will be developed to include such topics as the role and extent of police involvement in other community activities and the extension of career opportunities in police work to broader segments of the community. (PDL)

267. LAW ENFORCEMENT PROGRAM

- (a) Robert L. Wendt. (b) In process. Completion scheduled for 1969. (c) University of North Carolina, Institute of Government, and North Carolina Fund (Durham). (d) None.

Problem. Establish within the Police Department of Winston-Salem, North Carolina, a special unit to be called the Community Services Unit. This Unit will work in a special area of the city to provide crime prevention and protective services for the community. It will operate within the Crime Prevention Bureau and be coordinated with the Juvenile Unit. A civilian advisory council is to be established to facilitate interagency communication and give counsel to the Chief of Police. Police officers on the force will receive specialized training. (JS)

268. POLICE-SCHOOL LIAISON PROGRAM

- (a) James W. Rutherford and others. (b) In process. An annual two-day conference of Police-School Liaison officers is held each spring. School administrators along with Youth Bureau

Commanders are invited to attend to receive an explanation of the program. For information, contact James W. Rutherford, Chief of Police, City of Flint, Michigan. (c) City of Flint, Michigan, Board of Education and Division of Police. (d) None.

Problem. To prevent delinquency by providing early contacts between policemen and juveniles who are tending to drift toward serious misbehavior patterns.

Method. Juvenile officers are assigned to the Flint, Michigan, schools for the purpose of establishing closer relations between the police and school personnel. The Liaison Officer works in close cooperation with social agencies and correctional institutions, trying to identify and solve juvenile programs arising in the home, the school, or the community. (JWR)

269. INITIAL REACTIONS OF MINNEAPOLIS POLICE OFFICERS TO THE PRESENTATION OF A NEW CASEWORK SERVICE

- (a) R. W. Faunce and Bonnie J. Murton.
- (b) Completed. For information, contact R. W. Faunce, Research Director, Youth Development Project, Chicago at Sixth Street, Minneapolis, Minnesota 55415.
- (c) Community Health and Welfare Council of Hennepin County, Youth Development Project, Minneapolis, Minnesota; Minneapolis Police Department; Family and Children's Service; and United Fund of Hennepin County.
- (d) None.

Problem. In September, 1964, a social caseworker from The Family and Children's Service was assigned to the Minneapolis Police Department to assist officers with young first offenders, age twelve and under. The purpose of the program and its method of operation were explained to all officers who might have occasion to make referrals to the caseworker. Their initial reaction to this addition of social casework to police department services was recorded.

Findings. Police reaction to the description of the program was overwhelmingly favorable. Nine out of ten officers said they would be willing to make referrals if the occasion arose. Only four gave an outright "no." (JS)

270. THE EMERGING ROLE OF THE PROFESSIONAL POLICEMAN IN CONTEMPORARY SOCIETY

- (a) William J. Couperthwaite and Ashley A. Aderholdt.
- (b) In process.
- (c) District of Columbia, Metropolitan Police Department, under sponsorship of U. S. Department of Justice, Office of Law Enforcement Assistance.
- (d) None.

Problem. Develop a training procedure which will initially introduce members of the police department to the concept of the emerging role of the professional policeman in contemporary society, and which will constitute a base from which the department can maintain such training capability internally.

One of the crucial problems facing law enforcement agencies today is that of relating effectively to the complex environment of contemporary society within which they must perform. The law enforcement organization needs to develop personal knowledge and skills for dealing successfully with the changing social patterns of the modern community; needs in-house capability to prepare its officers to understand, anticipate, and cope professionally with changing community attitudes and behavior responses.

Method. The project will employ laboratory learning experiences and a problem-solving approach to enable participants to apply gained information and insights immediately to their own work problems. The following methods will probably be used: presentations with visual aids, discussion groups, skill practice exercises, development groups, problem census, case studies, role playing, application sessions, instrumentation for evaluation, and assigned reading. (JVW)

271. WORKSHOP IN POLICE-COMMUNITY RELATIONS

- (a) Philip M. Kitay and Herman Ebeling.
- (b) In process. Two workshops were held in July and August, 1967. Will continue in 1968.
- (c) Adelphi University, Department of Psychology, under sponsorship of Adelphi University and National Conference of Christians and Jews.
- (d) None.

Problem. Conduct workshops to improve relationships among community organizations, the general community, and those engaged in the administration of justice, i.e., the police, corrections, the courts.

Method. The theme of one workshop was "The Administration of Justice as a Community Responsibility." The participants were equally divided between those representing community institutions and organizations and those engaged in the administration of justice. Lecturers included representatives of such groups as CORE, American Civil Liberties Union, and the clergy. One day was devoted to lectures given at the Y.W.C.A. in Harlem. The methods employed in this workshop have been used as a model for such workshops elsewhere. (PMK)

272. EDUCATIONAL T.V. IN PUBLIC EMPLOYEE TRAINING

- (a) Robert F. Wilcox. (b) In process.
(c) San Diego State College, Public Affairs Research Institute. (d) None.

Problem. Study the potential of using educational T.V. in Public Employee Training.

Method. Review the development of in-service educational television training in other parts of the country; determine what types of employee training needs are common to all or most jurisdictions within the San Diego County area; determine what resources are presently available to assist in developing such a program; and determine what costs would be incurred in the overall development and implementation of an in-service educational T.V. training program. (WRB)

Planning

273. PRINCIPLES AND PRACTICE OF URBAN PLANNING

- (a) William I. Goodman and Eric C. Freund (eds.). (b) Completed. To be published under the above title and available February, 1968, from The International City Managers' Association, 1140 Connecticut Avenue, N. W., Washington, D. C. 20036. Approximately 560 pp. Price not yet determined. (c) The International City Managers' Association. (d) 13:2-p. 143.

Problem. This is an expanded and completely rewritten edition of the book formerly titled Local Planning Administration. Since first published in 1941, it has served as an indispensable training and reference guide for teachers, students, and local government administrators. This updated edition covers new areas of intergovernmental relations, economic studies, elements of design, quantitative techniques, social welfare aspects of planning, development objectives, programming, and public relations. The book also covers more traditional areas--population studies, land use studies, transportation planning, municipal facilities planning, the comprehensive plan, zoning, land subdivision, urban renewal, and organization and administration of the local planning agency. It numbers approximately 560 pages with 100 illustrations and 50 statistical tables; includes a comprehensive bibliography and index. (JCS)

274. REGIONAL DEVELOPMENT POLICY AND PROGRAMMING

- (a) Jack Meltzer, Brian J. L. Berry, and Eugene Smolensky. (b) In process. Research progress to be reviewed by the investigators at the EDA Office of Economic Research Conference to be held fall of 1968 for grant institutions and contractors. (c) University of Chicago, Center for Urban Studies, under sponsorship of Office of Economic Research, Economic Development Administration. (d) None.

Problem. A research and training program designed to increase understanding of and experience in the structure, interdependencies and context of urban and regional planning. The four major topics are: (1) the spatial structure of growth; (2) federal programs and the planning function operative within the regional framework; (3) overlapping systems of local government related to overlapping activity systems within the regions and its parts; and (4) the location and scale of public facilities and their spill-over effects, optimum regionalization, and setting optimum decision rules. (CAS)

275. REVIEW AND EVALUATION OF MAJOR AUTOMATED SYSTEMS USED FOR COMPREHENSIVE PLANNING AND PROGRAMMING

(a) V. V. Almendinger, W. O. Crossley, E. W. Franks, K. A. Hinman, J. M. Kibbee, and Myron B. Solo. (b) In process. (c) System Development Corporation, under sponsorship of U. S. Department of Housing and Urban Development. (d) None.

Problem. Review and evaluate urban and regional information systems used for comprehensive planning and programming. Criteria and policies will be formulated to guide governmental decisions concerning the level of support to be given particular existing or proposed urban and regional information systems. Guidelines for the preparation and design of information system development plans will be suggested for use by public agencies engaged in urban or regional comprehensive planning programs. (SIE)

276. A STATE-WIDE INFORMATION SYSTEM CONCEPT FOR COMPREHENSIVE STATE AND LOCAL PLANNING

(a) Robert R. Kley, William Martin, James C. Kellogg, and John Olson. (b) In process. (c) Technology Planning Center, Inc. (d) None.

Problem. Investigate the concept of a state-wide information system as a tool for comprehensive planning. Drawing heavily on past Department of Defense experience with information networks, this study developed an analytical structure for a state-wide information system. A general conclusion which was empirically supported was that the effectiveness of state departments and officials could be enhanced through the collection of data by fine grain. Accordingly, several methods for accomplishing this were investigated. (RRK)

277. A COMPREHENSIVE STUDY OF PLANNING ACTIVITIES IN MASSACHUSETTS

(a) Not reported. (b) In process. (c) State of Massachusetts, Executive Office for Administration and Finance, Central Services and Planning Division, with support from U. S. Department of Housing and Urban Development. (d)

None.

Problem. To develop better coordination of the long-range program planning activities of the many departments and agencies of the State's government and provide a central clearinghouse and permanent liaison point for federal projects and programs coming into the State. The study is designed to produce these results: (1) An overall, long-range operational plan for organization and administration of the executive branch of the State's government. (2) A definitive statistical basis for short-and-long range projections in all areas affecting state level planning. These include such areas as transportation, health, education, welfare, construction, manpower, public safety, telecommunications, economic and environmental development, regulatory functions, fiscal affairs, administrative organization, and emergency operations. (3) Workable procedures for continuous coordination of federal programs within the State, leading to better federal-State communication and a closer, more efficient working relationship. In fulfilling these aims, close attention will be paid to their possible future usefulness as guidelines for other states. All work will be fully coordinated with both metropolitan area and regional planning agencies, as well as with the Massachusetts Department of Commerce and Development which coordinates planning activities relating to specific localities. (HUD)

278. PUERTO RICO PLANNING STUDY

(a) Jerome L. Kaufman, Frank Beal, and Charlotte Bingham. (b) In process. Completion scheduled for September, 1968. (c) American Society of Planning Officials. (d) None.

Problem. To determine how the Puerto Rico Planning Board might best adapt itself in the future to guide commonwealth development within the framework of the changing demands which face it as a result of Puerto Rico's economic development and population growth.

Method. Extensive interviews will be conducted with key Puerto Rico government officials and private citizens to determine how the present Puerto Rico development guidance system works and the role of the Planning Board in that system. Reports, laws, studies, and plans will also be analyzed for this purpose. A brief analysis will be undertaken

to identify principal features of the development guidance system in other countries for comparative purposes. Based on these analyses and additional interviews with Puerto Rico experts, a proposed development guidance system will be recommended with responsibilities allocated among government and the private sector; commonwealth government and local or possibly new forms of regional government; and the executive, administrative, and legislative branches of commonwealth government. Finally, more specific recommendations will be offered for the future organization, powers, staffing, budget, and work program of the Puerto Rico Planning Board. (LG)

279. DESIGN OF ORGANIZATIONAL MODELS TO IMPLEMENT COMPREHENSIVE PLANNING AND DEVELOPMENT IN MULTI-COUNTY DISTRICTS

(a) Harold R. Capener and Pierre Clavel. (b) In process. Completion scheduled for October, 1968. (c) Cornell University, Department of Rural Sociology, under sponsorship of U. S. Department of Commerce, Economic Development Administration. (d) None.

Problem. To investigate the organizational structures amenable to the formation of Multi-County Planning and Development Districts.

Method. An inter-disciplinary team of researchers will investigate design of organizational machinery in various types of districts. Task force groups will assist in the analysis of case studies in Economic Development Districts. Such matters as the functional roles of laymen and professionals, requirements for special educational services, role of the private sector in relation to the public, and other forces and factors contributing to or impeding development will be considered. (PC)

280. INTERGOVERNMENTAL ORGANIZATION FOR COMPREHENSIVE PLANNING IN URBAN COMMUNITIES

(a) Herman Kehrli. (b) In process. Completion and publication of report scheduled for June 30, 1969. (c) University of Oregon, Bureau of Governmental Research and Service, under

sponsorship of U. S. Department of Housing and Urban Development. (d) None.

Problem. Inventory and evaluate intergovernmental relations for joint or cooperative urban planning in communities under 150,000 population in the United States and for development of model state planning legislation, sample intergovernmental agreements, and operating guidelines for planning cooperation in such communities.

Method. (1) Determine extent of existing joint or cooperative planning programs in communities under 150,000; (Both successful and unsuccessful cooperative efforts will be studied, and an effort made to identify factors contributing to success or failure.) (2) analyze and digest the laws and legal opinions relating to intergovernmental cooperation and urban planning in each state; (3) prepare detailed descriptions of cooperative or joint planning agencies; (4) conduct intensive case studies of selected intergovernmental planning programs with emphasis on evaluation of various organizational and administrative arrangements and measurement of the impact of cooperative and joint action on the overall planning program of the area; (5) develop model legislation, sample agreements and suggested operating guides for area-wide joint or cooperative planning programs in urban areas under 150,000. (KCT)

281. PLANNING FOR SMALLER COMMUNITIES

(a) Not reported. (b) In process. Final report expected in mid-1968. (c) University of Arkansas, City Planning Division, under sponsorship of U. S. Department of Housing and Urban Development. (d) None.

Problem. To develop guidelines for the content of the planning program, procedures, and requirements for planning as applicable to incorporated communities outside SMSA's and under 2,500 population. (1) Recommend a simplified planning program and prepare prototype studies, plans, and implementing measures; (2) recommend procedures to accomplish the program and to involve public officials in planning; and (3) suggest planning requirements to be used by Regional HUD offices in administering the Urban Planning Assistance Program, and in the certification and recertification of the Workable Program.

Method. (1) Study ways in which a planning program may be simplified, including plan implementation measures, and procedures for planning; (2) develop prototype planning program through actual field work on selected nonurban communities in Arkansas; and (3) prepare a manual for planning-program administrators and professional planners, and a summary report with recommendations for administration of the Urban Planning Assistance Program in nonurban communities. (ACSP)

282. A DECISION-THEORETIC APPROACH TO WEIGHTING COMMUNITY DEVELOPMENT CRITERIA AND EVALUATING ALTERNATIVE PLANS

(a) Charles C. Schimpeler. (b) Doctoral dissertation completed and published under the above title, August, 1967. (c) Purdue University, Kentucky Department of Highways, Division of Planning, and Louisville Metropolitan Comprehensive Transportation and Development Program with support from U. S. Department of Transportation, Federal Highway Administration.

Problem. To develop quantitative methods for weighting community decision criteria and objectively considering these weighted criteria in the evaluation of alternative plans. A hierarchy of generalized goals, categories, and specific objectives is developed along with an associated weighting of these decision criteria. Community political structure and decision making are studied relative to the formulation of goals and objectives, and to plan implementation.

Method. The conventional scaling techniques of ranking and rating are utilized as well as two variations of the method of successive comparison. Included in the statistical analyses were inter-method, inter-judge, and intra-judge comparisons. Criteria weights were established by three groups of judges: Task Force 5 of the Mayor's Citizens Advisory Committee, the full membership of that committee, and graduate student control group. Several approaches to plan evaluation are considered and one method, the effectiveness matrix technique, applied in the evaluation of three alternative plans. Effectiveness values for each plan were determined by a single group of professional planners and engineers.

Findings. Community decision criteria may be effectively developed and weighted and these weighted criteria used in objective plan evaluation. The suggested variations of the successive comparison methods produced stronger agreement among judges and these variations result in a more rapid closure of the method. By proper stratification into subgroups, a large number of criteria may be effectively weighted. Criteria formulation and weighting can be accomplished by an effective group of direct and indirect community influentials. The hierarchy of goals and objectives is an effective tool for both decision makers and professional planners in their analyses of community value systems. (CCS)

283. A GOAL ACHIEVEMENT FRAMEWORK FOR THE MODEL CITIES PROGRAM

(a) Brian J. L. Berry, Darrel J. Vorwaller, and Jack Meltzer. (b) Completion expected winter of 1968. (c) University of Chicago, Center for Urban Studies, under sponsorship of the City of Chicago. (d) None.

Problem. To develop a goal-achievement framework for the model cities program predicated upon cost-effectiveness principles of program development and evaluation.

Method. Develop performance measures and standards, analyze the interrelatedness of these measures, and provide measures of degree of goal-achievement. The study will culminate in: (1) example studies of cost-effectiveness analysis applied to alternative model cities program proposals and (2) a suggested monitoring system for assessing program effects during implementation phases. (CAS)

284. SOCIOECONOMIC DATA FOR URBAN PLANNING

(a) Doris B. Holleb and Jack Meltzer. (b) Completion expected December, 1967. (c) University of Chicago, Center for Urban Studies, under sponsorship of U. S. Department of Housing and Urban Development, Urban Planning Assistance Program. (d) None.

Problem. How to select and use socioeconomic data in urban, comprehensive planning. The

question of selection and effective utilization of socioeconomic data is approached from two directions: (1) what data are needed for informed policy decisions about a selected number of critical social questions; (2) what are present data availabilities and how can they be utilized more effectively? (CAS)

285. FEASIBILITY OF ESTABLISHING A SAMPLING FRAME FOR AMERICAN COMMUNITIES

(a) P. H. Rossi and R. L. Crain. (b) In process. (c) University of Chicago, National Opinion Sociology and Social Research Center, under sponsorship of National Science Foundation, Division of Social Sciences. (d) None.

Problem. In large measure, the study is designed to test the feasibility of establishing on a permanent basis techniques for gathering information about cities through use of local interviewers and with advice of local social scientists. It is expected that NORC will be able to offer the services of this data collection method to other social scientists.

Method. Conduct a series of pilot studies of decision making by communities ranging from 50,000 to 1,000,000 in population, in the areas of air pollution control, urban renewal, and hospital coordination; study the mayor's election as related to this topic. (RLC)

286. FEASIBILITY STUDY FOR THE SAN DIEGO METROPOLITAN DATA BANK

(a) W. Richard Bigger, Harold H. Haak, Robert F. Wilcox, Don B. Leiffer, Haines B. Remmey, and Ross Cook. (b) In process. (c) San Diego State College, Public Affairs Research Institute, under sponsorship of City of San Diego, San Diego City Schools, and County of San Diego. (d) None.

Problem. A preliminary study to determine the desirability and feasibility of establishing a metropolitan data bank in the San Diego area operated jointly by local jurisdictions and San Diego State College with appropriate relationship to state and federal agencies. A major study would establish the computerized central information

system for the San Diego metropolitan area, its financing, administration, and kind of equipment required, needed in order to establish the data bank. (WRB)

287. RELATIONSHIP OF CITY PLANNING TO HEALTH PLANNING

(a) Jerome L. Kaufman, Frank Beal, and Mary Ann Holohean. (b) Completion scheduled for December, 1967. (c) American Society of Planning Officials, under sponsorship of U. S. Public Health Service. (d) 13:1-5.

Problem. To relate city planning to health facility and service planning: (1) determine the present working relationships between city and health planners and the substance of the support city planners presently give to health planning; (2) suggest an ideal working relationship between the two disciplines; (3) prepare a series of recommendations directed primarily to city planning agencies to guide them in making a greater contribution to health planning.

Findings. Questionnaires have been received from 204 city, county, and regional planning agencies; interviews with health professionals and urban planners in five major metropolitan areas have been completed. The findings to date are that urban planners, for the most part, do not participate in community health planning activities and in many instances are largely unaware of the health planning being undertaken in their communities. For their part, the health planners have given little thought to the possible contributions an urban planning agency could make to their work. The causes of this lack of planning integration are many, including: (1) the relative immaturity of the health planning movement; (2) the high degree of fragmentation that still characterizes the health field; (3) resistance on the part of health planners to outside interference; and (4) the general lack of financial and manpower resources. (LG)

288. PLANNING THEORY

(a) Herman J. Berkman. (b) Completed and published November, 1967, under the above title as "Council of Planning Librarians Exchange Bibliography No. 33." Available from Mrs. Mary Vance, Editor,

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Council of Planning Librarians Exchange Bibliographies, P. O. Box 229, Monticello, Illinois 61856. 14 pp. \$1.50 per copy. (c) New York University, Graduate School of Public Administration. (d) None.

Problem. This bibliography is a revision of a previous work by the Council of Planning Librarians entitled An Introductory Bibliography in Planning Theory. The current bibliography was compiled to provide references for a course in planning theory and, in addition to the inclusion of current references, contains sections on methodology and technique, goal formulation, and data processing. (ML)

289. AN INDIVIDUAL REVIEW OF CURRENT PLANNING LITERATURE

(a) John W. Dyckman. (b) Completed and published December, 1967, under the above title as "Council of Planning Librarians Exchange Bibliography No. 36." Available from Mrs. Mary Vance, Editor, Council of Planning Librarians Exchange Bibliographies, P. O. Box 229, Monticello, Illinois 61856. 15 pp. \$2.00 per copy. (c) University of California (Berkeley). (d) None.

Problem. A bibliographic essay, originally delivered September, 1967, at the annual conference of the Council of Planning Librarians in Washington, D. C., which appraises current trends in planning literature and makes a number of proposals towards improving both its content and availability. (ML)

290. COMMUNITY PLANNING IN OREGON: A LIST OF PUBLICATIONS

(a) Not reported. (b) Published August, 1967. 100 pp. \$2.00 per copy. (c) University of Oregon, Bureau of Municipal Research and Service. (d) None.

Problem. This bibliography lists community planning studies and reports which were published by and/or about Oregon communities from 1946 to mid-1967 by geographic area. The bibliography is useful to citizens and organizations interested in community development, to local government officials, to

state and federal agencies which have programs related to community development, to business and industrial interests, and to professional planners. (ML)

Public Finance

291. FISCAL BALANCE IN THE AMERICAN FEDERAL SYSTEM

(a) ACIR Staff. (b) Publication scheduled for late 1967. (c) Advisory Commission on Intergovernmental Relations. (d) 13:2-166.

Problem. To develop alternative approaches, consistent with philosophical values of the federal system, for financing the expanding and changing requirements of state and local governments in the years ahead.

Findings. Intergovernmental fiscal relations today are characterized by: (1) a widening fiscal disparity between central cities and suburbs, with an increasing concentration of "high cost citizens"--children in school, the elderly, welfare recipients--in the central city; (2) a national revenue system more responsive to economic change than state-local systems; (3) greatly increasing expenditure demands for domestic purposes; (4) considerable untapped revenue potential at state and local levels, but barred from ready access except at high political risk; (5) a record-breaking national budget deficit and the prospect of intense competition for public funds between international and domestic needs; (6) need for consolidating and improving management of federal categorical grant-in-aid programs; and (7) need for strengthening state and local governments to better administer those programs.

Based on these and other findings, the Commission made 39 recommendations, including the following: (1) the federal government should broaden the mix of federal aid to states and localities to include not only existing type "categorical assistance" but also block grants and general support grants--so called "revenue sharing"; (2) Congress and the President should strive toward reducing by at least half the numerous separate authorizations for federal categorical grants; (3) states should equip themselves with a productive and broad-based revenue system to enable them to underwrite the major portion of their expanding expen-

diture requirements; (4) states should adopt policies to shield basic family income from sales tax excesses and limit the burden of residential property tax on low income families; (5) states should establish regional school property taxing districts empowered to levy area-wide taxes for allocation among school districts in the region; (6) states should remove any legal obstacle to greater involvement of private enterprise in the solution of central city problems and encourage private-public efforts to overcome economic and fiscal deterioration in major cities; (7) states should empower a state agency to order, where needed, consolidation or dissolution of local government units within a metropolitan area to minimize continued fragmentation of the tax base; (8) a national system should be developed for collection, analysis, and dissemination of social statistics with full participation by federal, state, and local governments and special emphasis upon the development of such data for substate geographic areas as well as state and national aggregates; (9) there should be improved coordination, through the Executive Office of the President, of federal grant programs being administered by a variety of federal departments and agencies; and (10) to coordinate federal grant programs effectively, states must revitalize and modernize their governments, including giving the governor increased budgetary, planning, and reorganization power, and strengthening legislatures through annual sessions and full-time professional staffs. (AJR)

292. FISCAL RELATIONS BETWEEN STATES AND CITIES

(a) John B. Legler. (b) Completed. Prepared for presentation at the Washington University Conference of Mayors, April 14-16, 1967. Available from Washington University, Institute for Urban and Regional Studies, St. Louis, Missouri 63130, as Working Paper INS 2. (c) Washington University, Institute for Urban and Regional Studies, under sponsorship of Ford Foundation. (d) None.

Problem. This study traces the historical development of state-fiscal relations in terms of the levels of state aid and the functional distribution of state aid. Differences in the levels and direction of state aid in support of local government,

the needs for tax coordination among levels of government, and the prospects for strengthening the fiscal position of the city are discussed.

Findings. It concludes that: (1) local expenditures are likely to continue to grow at a rate in excess of the growth in GNP; (2) the growth in local expenditures can be supported without loss of local autonomy only if local revenue structures are reformed and strengthened by a cooperative effort on the part of both state and local government. Reforms will have to include both an improvement of the property tax and a more efficient use of nonproperty taxes effected through close state-local coordination of tax efforts. (JBL)

293. STATE-LOCAL TAXATION AND INDUSTRIAL LOCATION

(a) Not reported. (b) Completed and published under the above title. Available from Advisory Commission on Intergovernmental Relations, Room 712, 1800 G Street, N. W., Washington, D. C. 20575. No charge. (c) Advisory Commission on Intergovernmental Relations. (d) 11:1-2; 11:2-119.

Problem. A study of recommendations concerning the relationships between state and local tax and expenditure policies and the locational decisions of business management.

Findings. States that provide special tax concessions to new industry may be setting in motion a self-defeating cycle of tax undercutting and irrational discrimination among business firms. Public service levels, good educational facilities, in particular, are having increasingly greater influence on plant location. The relative importance of the tax differential factor appears to increase as the location process narrows down to a particular jurisdiction within a general region. Especially within a metropolitan area, "low" tax loads exert some discernible pull on plant location. Differences in tax levels among widely separated states exert little influence on plant locations. As between regions, nontax factors such as access to markets, and labor and supply costs, are decisive.

On the basis of its study, the Commission: (1) recommends that the President direct the appropriate federal agencies to assemble

on a continuing basis more timely and detailed geographical information on industrial location trends, including a breakdown among central city, suburban, and rural portions of Standard Metropolitan Statistical Areas; (2) condemns the practice of preferential assessments of new industrial property by local assessors and calls on states to take steps to bring about uniform practices in the assessment of such property; (3) suggests that states eliminate the tax on business inventories and reimburse localities for the loss of revenue, and improve the administration of taxes on business personality, notably machinery and equipment. (JS)

294. FISCAL CRISIS IN EAST ST. LOUIS, ILLINOIS

- (a) David C. Ranney. (b) In process. (c) Southern Illinois University (Edwardsville), Public Administration and Metropolitan Affairs Program. (d) None.

Problem. A detailed investigation of the extent and nature of a fiscal crisis which East St. Louis, Illinois, faces.

Method. The causes of the crisis are explored and future fiscal prospects projected. The study involves examination of fiscal conditions in 1966. (DCR)

Police Power

295. NEW TOWNS AND LAND-USE CONTROLS

- (a) Dennis O'Harrow and Richard F. Counts, Jr. (b) Completed. Transmitted to sponsoring agencies for publication. (c) American Society of Planning Officials, under sponsorship of Advisory Commission on Intergovernmental Relations and the National Commission on Urban Problems. (d) None.

Problem. To suggest appropriate forms for new town land-use regulations in the United States.

Method. Land-use controls applied to new communities in the U. S. were analyzed and compared with administrative techniques used in British and European new towns.

Special attention was given to developers' problems under existing American controls.

Findings. More development guidance is necessary to insure effective land use in the creation of self-contained new towns. Rigid controls, characteristic of existing, traditional zoning and subdivision regulations, are not enough to facilitate town development in the United States. Site plan review, together with bonuses or other developer options, provides a more appropriate regulatory framework for large, single-owner tracts by creating a working partnership between the developer and the governmental authority responsible for new town development guidance. (LG)

296. URBAN BEAUTIFICATION DEMONSTRATION PROJECT

- (a) Not reported. (b) In process. Completion and publication of project report and the manual expected in early 1969. (c) University of Arkansas, City Planning Division, under sponsorship of U. S. Department of Housing and Urban Development. (d) None.

Problem. To demonstrate how to improve and make better use of municipal codes to create a more visually pleasing environment for smaller cities and towns: (1) identify problems of beautification to which code provisions can contribute solutions; (2) identify code provisions which may apply to these problem areas through review of the literature and of existing municipal codes; (3) evaluate these provisions in terms of their effectiveness in reaching beautification objectives, and formulate recommendations for desirable code provisions; (4) evaluate administrative and enforcement procedures used to implement code provisions.

Method. (1) Conduct case studies in three cities, Springfield, Illinois (population of 87,000), Overland Park, Kansas (51,500), and Rogers, Arkansas (8,000). Springfield and Overland Park have community beautification programs in progress. The three represent a fairly wide geographical spread in the Midwest. (2) Prepare a manual for municipal officials and civic leaders which includes an inventory of aesthetic problems that can be controlled or solved by codes, recommendations of codes for beautification, suggested provisions of model codes, recommended administration and enforcement prac-

tices, and a selected bibliography. (ASCP)

Government--Intergovernmental
Relations

297. FEDERAL AID PROGRAM INFORMATION: A
TEN-CITY SURVEY OF USER REQUIREMENTS

(a) Peter Shoup, Robert Boyd, and Bruce Macy. (b) In process. (c) Midwest Research Institute, under sponsorship of U. S. Department of Housing and Urban Development. (d) None.

Problem. (1) Identify the changing shape and characteristics of the audience for information about federal aid programs at the metropolitan government level--the make-up, sophistication, and present information channels of those at the metropolitan level responsible for area-wide planning and development; (2) provide a clear definition of the kinds of federal program information needed by this audience and the preferred means of obtaining it.

Method. (1) Collect and synthesize what is known about the ways in which metropolitan governments deal with federal program information requirements; (2) using a careful selection process and research design, survey the actual audience for federal program information in ten metropolitan areas of the United States. (PLB)

298. JOBS AND CIVIL RIGHTS--A STUDY OF
THE IMPLEMENTATION OF FEDERAL EQUAL
EMPLOYMENT OPPORTUNITY POLICIES

(a) Richard P. Nathan. (b) Completion scheduled for fall of 1967. (c) The Brookings Institution, under sponsorship of U. S. Civil Rights Commission. (d) None.

Problem. Identify major federal equal employment opportunity policy objectives and analyze the administrative and coordinative machinery designed to implement these policies. In effect, the study involves a vertical tracing-out of policy lines from the point at which policy is formulated at the national level to its implementation at the local or labor market level, including intermediate states--particularly the roles

of federal field personnel and state and local government program administrative personnel.

The study covers enforcement and affirmative action activities of: (1) The Equal Employment Opportunity Commission under Title VII of the 1964 Civil Rights Act; (2) the Office of Federal Contract Compliance and federal contracting agencies under Executive Order 11246; (3) federal agencies responsible for administering Title VI of the Civil Rights Act of 1964, as related to employment. It also covers relevant aspects of federal government manpower programs, including: (1) activities of the U. S. and state employment services in such fields as placement, testing, and counseling to promote equal employment opportunity; (2) activities of the Bureau of Apprenticeship and Training to promote equal employment opportunity; (3) equal employment opportunity policies under federally sponsored or aided job training programs, including but not limited to those conducted under the Manpower Development and Training Act and the Economic Opportunity Act.

Method. In addition to analysis of available program information and data, the study has relied on interviews with selected respondents in and out of government. Interviews were conducted with federal government program administrators in Washington and six selected field cities; affected state and local government program administrators; and representatives of national and local clientele groups. (RN)

299. COMMUNITY PLANNING PROBLEMS IN
FEDERAL GRANT PROGRAMS

(a) James L. Sundquist, David W. Davis, and Steven D. Lebowitz. (b) In process. Completion and publication of findings as book by Brookings Institution expected during latter part of 1968. (c) Brookings Institution, under sponsorship of U. S. Department of Commerce, Economic Development Administration. (d) None.

Problem. In recent years, Congress has approved new programs of grants-in-aid at an extraordinary rate. It has also added agencies to the panoply of those administering grant programs. In contrast to some of the older federal aid programs which subsidized regular state activities through

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formula grants with limited federal control and supervision, the new programs characteristically require federal approval of specific projects. The result is a structure of federal-state-local relations unprecedented in its intimacy and its complexity, as well as its scope. The federal government has set goals which depend for their achievement upon the motivation and competence of thousands of communities throughout the country to initiate and carry out projects which will effectively serve the national purpose. In grant programs requiring project approval, the federal government commonly offers money not only to finance the projects themselves but also to finance the planning processes which prepare the projects. However, this system has evolved without benefit of any guiding doctrine or master pattern. The result is a welter of relationships--some programs going through the states, some bypassing the states and going directly to nongovernmental or quasi-governmental institutions established expressly for the purpose of participating in the federal program. Planning requirements vary from program to program. Federal agencies are independently encouraging the creation of community agencies designed for their particular program purposes with no governing doctrine as to how these agencies and their planning processes should fit together in an effective, coherent way in each community.

Method. Conduct personal interviews with people involved in federal grant programs at the community, state, and federal levels in a cross section of eight states; interview extensively federal officials in Washington, D. C.; examine public documents that describe federal doctrines for coordination and planning public resources at the community level. (SDL)

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New Research Programs and Information Services

300. NATIONAL INSTITUTE FOR URBAN DEVELOPMENT

For many years, persons who are interested in urban research have discussed the need for some sort of national organization for urban studies, comparable to such groups as the National Institutes of Health, or the Rand Corporation, adequately funded and staffed to bring leadership to a research and development effort commensurate in magnitude with the problems to which it is directed. The first steps in this direction have finally been taken with the appointment, by President Johnson, on December 6, 1967, of a six-man committee to organize a national, independent, non-profit Institute for Urban Development, to conduct continuing studies of the problems of large cities.

Objectives for the new institute, as outlined by the President, include the following: (1) To develop a capacity for analyzing urban problems in relation to federal and local governmental efforts, ranking priorities of need as well as effectiveness of investment. (2) To conduct long-range studies to gather data on all aspects of urban problems. (3) To become a focal point for various disciplines to share information and ideas. (4) To provide an independent, objective base for the review and evaluation of remedial problems.

While it is anticipated that the Institute will be established apart from the government, it will be financed initially from the \$10,000,000 recently made available by Congress to the Department of Housing and Urban Development for research purposes. Financial support from private foundations may be sought at a later date.

Initial staff requirements are expected to include from 60 to 100 professionals in social, economic and engineering disciplines, and it is hoped that the organization will be sufficiently advanced to begin recruiting by midsummer. Members of the organizing committee, who have been asked to draw up incorporation papers, nominate a board of directors, and help select a site, include Irwin Miller, chairman of the board of Cummins Engine Company, Columbus, Indiana,

chairman; Arjay R. Miller, president of the Ford Motor Company; Kermit Gordon, president of the Brookings Institution; McGeorge Bundy, president of the Ford Foundation; Richard E. Neustadt, head of the John F. Kennedy Institute of Politics at Harvard University; and Cyrus E. Vance, a New York attorney, recently Deputy Secretary of Defense. (SK)

301. NATIONAL ACADEMIES OF SCIENCE AND ENGINEERING STUDY OF URBAN RESEARCH

In connection with the establishment of a National Institute of Urban Development, noted above, a parallel effort is of special interest.

Last August, the Department of Housing and Urban Development entered into a contract with the National Academy of Sciences and the National Academy of Engineering looking toward the establishment of a national urban research program. Under the terms of the agreement, the academies will advise HUD on a number of points: the kinds of social, economic, and institutional questions which need to be raised and answered in order to establish effective long-range planning to meet the nation's housing and community needs; the overall research capabilities which HUD should foster as a national network for carrying out research and development; the optimum involvement of academic institutions in support both of local government and of HUD's long-range research and development activities; strategies for encouraging industry to develop and put into practice useful new technologies and cost-reducing approaches to the problems of housing and community development; and strategies for mobilizing and augmenting other capabilities now available which can also assist toward that same objective.

In the academies, two parallel committees have been established, one in the Division of Engineering and the other in the Division of Behavioral Sciences. In order to keep the total urban problem in perspective, each committee will have several members representing the disciplines of the other. The committees, in turn, will organize subgroups to tackle the various questions on which HUD asked for guidance.

Members of the committee in the Division of Engineering are: James F. Young, Vice President-Engineering, General Electric Company, Chairman; Gordon S. Brown, Dean, School of

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Engineering, Massachusetts Institute of Technology; A. Angus Campbell, Professor of Social Psychology and Director, Survey Research Center, University of Michigan; John H. Dessauer, Vice Chairman and Executive Vice President-Research and Engineering, Xerox Corporation; Robert H. Dietz, Dean, College of Architecture and Urban Design, University of Washington; Lawrence R. Hafstad, Vice President-Research Laboratories, General Motors Corporation; William C. Higdon, Vice President, Armco Steel Corporation; Nathan Keyfitz, Department of Sociology, University of Chicago; T. Y. Lin, Professor of Civil Engineering, University of California; Ruben F. Mettler, President, TRW Systems Group, Executive Vice President, TRW, Inc.; Robinson Newcomb, Consulting Economist; and Joseph Newman, Vice President, Tishman Research Corporation.

The committee in the Division of Behavioral Sciences includes: Raymond A. Bauer, Chairman, Professor of Business Administration, Graduate School of Business Administration, Harvard University; Edmund Bacon, Director, Philadelphia City Planning Commission; Brian J. L. Berry, Professor of Geography, University of Chicago; Harvey Brazier, Chairman, Department of Economics, University of Michigan; Lincoln Day, Associate Professor of Public Health and Sociology, Yale University; Nathan Glazer, Professor of Sociology, University of California, Berkeley; Amos Hawley, Professor of Sociology, University of North Carolina; Norton Long, Chairman, Department of Political Science, Brandeis University; Daniel Mandelker, Professor of Law, Law School, Washington University; William R. Mason, President, Irvine Company, Irvine, California; Alvin Weinberg, Director, Oak Ridge National Laboratory; Abel Wolman, Professor of Sanitary Engineering, Johns Hopkins University; and Paul Ylvisaker, Commissioner for the Department of Community Affairs for the State of New Jersey. (SK)

302. NATIONAL COMMISSION ON URBAN PROBLEMS

In his 1965 Message on the Cities, President Johnson urged the creation of a temporary national commission to generate "ideas and instruments for a revolutionary improvement in the quality of the American city." Congress later that year authorized and, in 1966, appropriated funds to carry out this purpose. In January, 1967, the President announced the appointment of Paul H. Douglas, former Democratic Senator from Illinois, as

chairman of the 16-member Commission.

The Commission serves directly under the White House and is independent in program and policy matters from other agencies of government. It will prepare recommendations that will go to the President, to Congress, and to the Secretary of the Department of Housing and Urban Development, none of which has any veto power over the work submitted by the Commission.

The Commission's recommendations are to be in several specific areas of urban concern: housing codes, building codes, zoning, property taxation, federal taxation as it affects urban growth and housing, and development standards. The Commission has been urged to find ways of making cities more liveable with special attention given to the need for increasing the supply of decent, low cost housing.

The Commission meets regularly and frequently. Subcommittees were formed so Commission members could give more detailed attention to specific matters. To focus on specific issues--drawing national attention to urban successes as well as urban roadblocks--the Commission scheduled public hearings in 18 cities for the months of May through October, 1967. The Commission is surveying past and current literature, meeting with the nation's urban specialists and developing liaison with other agencies and groups who have common interests. In addition to the final recommendations, it is anticipated that transcripts of hearings, study papers by staff members, and contributions of outside consultants prepared for the Commission will be published when deemed to be of general interest.

For information, contact Howard Shuman, Executive Director, or Walter Rybeck, Assistant Director, at the Commission's address, Room 640, 806 15th Street, N. W., Washington, D. C. 20005. (JS)

303. SUBCOMMITTEE ON URBAN AFFAIRS, JOINT COMMITTEE ON THE ECONOMIC REPORT, U. S. CONGRESS

At the beginning of the 90th Congress, a Subcommittee on Urban Affairs was formed under the Joint Economic Committee, and Representative Richard Bolling, Democrat from Missouri, named its Chairman. Staff work is under the supervision of James W. Knowles,

Director of Research. The purpose of the subcommittee is to conduct a broad, long-range study of all aspects of our urban environment, seeking to obtain better understanding of urban goals and problems, discover areas of agreement among the experts as to these goals and problems, and the approaches that seem most feasible for the solution of these problems. Emphasis will also be placed on relating these specialized problems to broader national issues of stable prices, full employment, and rapid economic growth.

The first step of the subcommittee was to invite a number of experts to prepare papers on various phases of urban life, so structured that every aspect was covered, though each specialist aimed at a particular part. These papers were compiled and published under the title Urban Affairs: Goals and Problems, Materials Compiled and Prepared for the Subcommittee on Urban Affairs, August, 1967. This publication is available from the Superintendent of Documents, Government Printing Office, Washington, D. C. 20402. 303 pp. \$.75 per copy.

Following its publication, public hearings were held on the contents of the compendium and discussed with the various individuals who contributed papers. The hearings have been published as Urban America: Goals and Problems, Hearings before the Subcommittee on Urban Affairs, September 27, 28, October 2, 3, and 4, 1967, and can also be obtained from the Superintendent of Documents, U. S. Government Printing Office, Washington, D. C. 20402. 239 pp. \$.65 per copy. In addition, the subcommittee's work has resulted in the publication of A Directory of Urban Research Study Centers. Limited copies are available from the Joint Economic Committee, New Senate Office Building, Washington, D. C. Additional copies are available from the Superintendent of Documents, Government Printing Office, at \$.25 per copy. (JS)

304. TORONTO'S CENTENNIAL STUDY AND TRAINING PROGRAMME ON METROPOLITAN PROBLEMS

Representatives from forty of the world's largest metropolitan areas, spanning six continents, have been engaged in a two-year project, The Centennial Study and Training Programme on Metropolitan Problems, sponsored by the Bureau of Municipal Research, Toronto, Canada. The Programme is a response to the

need for a comprehensive approach to the problems facing large urban areas throughout the world. The participating areas are at varying stages of development and have differing traditions and experiences. It is hoped that progress toward solutions realised by one area can be shared with others, and knowledge and insight beyond the reach of any single metropolitan area can be exchanged

In each of the forty areas taking part, a study group is the nucleus of activity within its own area. Each group brings together elected and appointed officials from all levels of government, businessmen, industrialists, engineers, social workers, architects, financial experts, planners, teachers, and members of public interest organizations. In August, 1967, the project culminated in a ten-day conference at York University, Toronto. The proceedings will be published as a book in the future. At the Toronto conference, it was decided that the Programme should be continued. The exact nature of organization and definite plans are not yet decided. Further information can be obtained from Simon Miles at the Bureau of Municipal Research, 4 Richmond Street East, Toronto 1, Canada.

305. U. S.-GERMAN COOPERATIVE PROGRAM IN NATURAL RESOURCES, POLLUTION CONTROL, AND URBAN DEVELOPMENT

In December of 1965, President Johnson and Chancellor Erhard initiated a cooperative program in the United States and the Federal Republic of Germany against blight and environmental pollution. The pattern for the cooperative venture was established during discussions held when the U. S. Natural Resources Mission to Germany, headed by Secretary of the Interior Stewart L. Udall, visited Germany in March, 1966. This was followed by subsequent meetings and exchanges of personnel, including discussions between the two program directors, Joachim Berg, Ministerialdirektor, Ministry of Health, director for Germany, and James Slater, International Activities Assistant, Department of the Interior, director for the United States.

The Program goal is to learn from each other, repeating the other side's successes and avoiding the other side's mistakes. Although present exchanges are among technicians, the Program might lead the way to cooperation among economists, legislators, and

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legal experts. The range of cooperation possibilities includes: (1) joint, complementary and coordinated research; (2) exchange of information, research findings, technical know-how, data, and publications; (3) exchange of personnel; (4) equipment testing and trial; (5) exchange of samples; (6) conferences and seminars; (7) training programs; and (8) study tours.

Progress has been made in the areas of water pollution, air pollution, coal research, and solid waste disposal. While work will continue in these areas, cooperative efforts will also include urban planning, electric power, and noise abatement. (JS)

306. COUNCIL OF STATE PLANNING AGENCIES

The Council of State Planning Agencies, a national organization established in 1964 for comprehensive statewide planning agencies, set up its office in Washington, D. C. on July 1, 1967. Recognized as a Cooperating Organization of the Council of State Governments, CSPA consists of representatives of those state units which, by law, or by legislative or executive directive, are assigned the responsibility for formulation and administration of comprehensive state development plans. Other state agencies, as well as educational institutions, private consultants, firms, organizations and individuals, may become associate members.

The Constitution of CSPA states six objectives: (1) To promote the principles of better state planning through a free exchange of information and ideas. (2) To improve communications at the interstate level by providing and maintaining a roster of central state planning agencies and of the names of individuals responsible for the management of them. (3) To encourage the maintenance of high standards of integrity and performance on the part of those engaged in planning activities within state governments. (4) To establish a closer relationship and to encourage cooperation among state planning agencies. (5) To enable state planning agencies to act collectively on matters of mutual interest and concern. (6) To advance the art and science of state, interstate and regional planning and to encourage programs to educate and train persons to perform professional work in these fields.

Dues are \$100 per year for both Members and Associate Members. Further information may

be obtained from David K. Hartley, CSPA's director, at 1735 DeSales Street, N. W., Suite 800, Washington, D. C. 20036. (DH)

307. URBAN AND REGIONAL SYSTEMS DEVELOPMENT PROGRAM AT NORTH CAROLINA

The Department of City and Regional Planning of the University of North Carolina at Chapel Hill has received a National Science Foundation grant to establish an Urban and Regional Systems Development Program. This effort will draw largely on the work of the Department and the Center for Urban and Regional Studies in urban development modeling systems and the simulation of water systems, and the resources available on the campus in theoretical statistics and information science. Under the new program, the Department is planning a major research effort aimed at the development of a systematic theory in the processes of urban and regional development. The Department is establishing an Urban and Regional Systems Group within the Department faculty and in association with related departments, and is establishing a Metropolitan Simulation Laboratory to facilitate the group's research and teaching. An important element of the program is the provision of assistantships and fellowships for students to work with the simulation laboratory in partnership with the faculty.

The research program will build on an already established nucleus of successful research, conducted by Stuart Chapin and others, in the basics of urban systems, which includes the development and testing of mathematical models of urban growth and investment decision models, and systems for codifying and analyzing urban behavior in terms of activity systems. The Metropolitan Simulation Laboratory will provide the means for experiments in urban structure and change and for testing concepts and method, by developing and maintaining an experimental urban field. It is planned to bring, in a sense, a number of metropolitan areas to Chapel Hill through coded representation and computer-oriented replication of their basic characteristics; and to make them available for student and faculty research.

It is expected that the urban and regional systems development program will produce significant results in five areas: (1) simulation models; (2) decision models; (3) measurement systems; (4) data systems and

information management; and (5) programming systems. (JS)

308. MICHIGAN STATE'S URBAN REGIONAL
RESEARCH INSTITUTE PROGRAM

In September of 1966, Michigan State University established its Urban Regional Research Institute as a component function of the School of Urban Planning. Under the direction of Richard Duke, Institute research focuses on urban policy formation, urban problems, and applications of computer technology to both of these. The Institute's objectives include promotion of systems analytic concepts and techniques in the study of urban growth and change, both for the creation of a coherent framework for urban growth and for the introduction of cost-effectiveness approaches to urban government. Most of the current work of the Institute centers on the various uses of gaming-simulation, especially in the "M.E. T.R.O." Project, for transmitting an understanding of urban development to public officials and for aiding research on the future of urbanism. (See Digest reports 12:1-70; 12:2-55.) The Institute has developed an extensive data file on the socio-economic characteristics of the Lansing, Michigan Metropolitan Area with a primary objective of making Lansing a laboratory community for urban research. (JS)

309. WORLD RESOURCES INVENTORY, SOUTHERN
ILLINOIS UNIVERSITY

The World Resources Inventory center at Southern Illinois University is essentially a coordination agency and clearinghouse for information on a world students program first suggested by R. Buckminster Fuller to the International Union of Architects at its sixth World Congress in England in 1961. Observing that the world's total resources now serve only 44 percent of humanity, Fuller advanced the view that these resources could, through competent scientific design and anticipatory planning be made to serve 100 percent of humanity. He suggested that IUA encourage architectural and environmental planning schools around the world to invest the next ten years in a continuing survey of the total chemical and energy resources now available to man on a global scale and of human trends and needs in relation to these resources, with

a view to redesign of their use for the good of mankind as a whole.

Student and school groups in many parts of the world have since taken up the idea on their own initiative, and a number of conferences and exhibits have been held, together with presentations at subsequent IUA world congresses, the most recent held in the summer of 1967 in Prague. This movement has now come to be known as the "World Design Science Decade 1965-1975." Six documents have been prepared which serve as guide sources for work in the program, as follows: (1) Inventory of World Resources, Human Trends and Needs, R. B. Fuller and John McHale, (1963) (2) The Design Initiative, R. B. Fuller, 1964. (3) Comprehensive Thinking, R. B. Fuller, 1965. (4) The Ten Year Program, John McHale, 1965. (5) Comprehensive Design Strategy, R. B. Fuller, 1967. (6) The Ecological Context: Energy and Materials, John McHale, 1967. Copies of these documents are available at \$5.00 each, with a price to libraries and booksellers of \$3.50. There is also a special student price of \$1.75 per volume. For further information, including handling and shipping charges, World Resources Inventory may be contacted at P. O. Box 909, Southern Illinois University, Carbondale, Illinois 62901 (JM)

310. URBAN AFFAIRS REPORTER, COMMERCE
CLEARING HOUSE

Further information on proposed reporting service on federal programs assisting state, county and city governments to be established by Commerce Clearing House, Inc. is contained in a brochure recently issued by that company. Developed after an extended consideration of the problem carried out in cooperation with a dozen national professional organizations, the proposal outlines three services to be made available to subscribers: (1) loose leaf volumes consisting of 5,000 or more pages that would contain information and explanations of existing programs expertly arranged by topic and indexed for continuing practical reference; (2) current reports, issued every two weeks, containing full text and explanatory coverage of new developments concerning relevant federal programs; and (3) a weekly separate summary giving a quick-reading review of developments and pointing up news of special interest, designed for routing to staff members to keep their information up-to-date.

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Detailed Federal agency directories, full texts of important laws and regulations, with specialized finding lists, summaries of bills in Congress with periodic reports on their current status, and cumulative keyed indexes would be features of the service, to be marketed at \$600 per year. Further information can be obtained from Commerce Clearing House, Inc., 4025 West Peterson Avenue, Chicago, Illinois 60646. (SK)

311. TECHNICAL INFORMATION EXCHANGE, AMERICAN INSTITUTE OF PLANNERS

The American Institute of Planners has established a Technical Information Exchange on State and Metropolitan Planning under an 18-month demonstration grant provided by the U. S. Department of Housing and Urban Development.

The general objectives of the Exchange are to improve the conduct and content of planning in state and metropolitan planning agencies and to demonstrate the feasibility and utility of approaches and procedures used for a continuing exchange of technical information. Of special interest are innovative techniques and/or the innovative application of existing techniques to the plan making process. Particular attention will be given to techniques which attempt integration of various sectoral functional planning, such as Health, Transportation, Education, and Utilities Planning, from an overall metropolitan or statewide point of view.

As part of the activity of the Exchange, AIP will canvass state and metropolitan planning agencies for significant technical documents. Documents received will be abstracted and included in an annotated bibliography. Abstracts, bibliographies and lists of key agency personnel will be distributed to the contributing agencies. In addition, at least two technical seminars probing selected current topics are planned. Proceedings will be issued to contributing agencies.

Current plans call for the agency canvass to be conducted about January 1, 1968. Mr. Barber's staff, various AIP Committees and a special review panel convened for the Exchange will carry out the work of the project. Inquiries about the Exchange should be directed to Brian Barber, Director of Research at AIP, 917 Fifteenth Street, N. W.,

Room 800, Washington, D. C. 20005. (BB)

312. EDUCATIONAL RESEARCH INFORMATION CENTER (ERIC)

Familiarly known as ERIC, the Educational Research Information Center has been established by the United States Office of Education to serve the educational research community by making available current educational research and research-related materials. Research in Education, a monthly publication which lists projects supported through the Bureau of Research has been published since November, 1966, and includes abstracts and detailed indexes of cited research documents. The annual subscription price is \$11.00; single issues are \$1.00. Address requests to the U. S. Government Printing Office, Washington, D. C. 20402. (ML)

Research Materials and Methods

313. THE FEDERAL INFORMATION EXCHANGE SYSTEM, OFFICE OF ECONOMIC OPPORTUNITY

Of considerable interest to all persons interested in urban and regional research, whether theoretical or applied, is detailed county data now becoming available from the Federal Information Exchange System of the Office of Economic Opportunity's Information Center.

The Center's Catalog of Federal Assistance Programs is, of course, well known. The first edition, in December, 1965, brought together for the first time under one cover information on some 260 Federal programs of special interest to the states and localities. Some 250,000 copies of this report were printed and distributed. The second edition, updated and expanded at the direction of Congress, and published in June, 1967, now includes information on 459 Federal assistance programs.

Early in 1966, the Center set out to design and develop a system which would make available detailed operating information covering the programs contained in the catalog. The result is a central data bank for use by all Federal, state and local agencies as well as private groups. A joint effort of some 31 Federal departments, agencies, boards and commissions, FLXS can identify outlays of

370 separate Federal programs and activities in every county in the United States. The system is capable of responding to requests for feedback of information in many forms, and reports are available giving state summaries, by county. Because of certain difficulties in the preparation of this type of material, including the use of approximations where records could not provide actual information, the figures given in the documents cannot necessarily be reconciled with data in the agencies' own financial and budgetary reporting systems. Nevertheless, despite the caveats, and the difficulties which will necessarily arise in the interpretation and use of the figures, they present a wealth of small-area information heretofore not available to the urban and regional analyst.

Another major effort currently underway involves working closely with state governments to make optimum use of the corresponding data which is available, or which could be made available, within the state departments. It is anticipated that this information, when it has been worked up, will be added to the Federal data bank. Currently FIXS is working in five states, and will proceed to other states, where requested by their Governors, as resources permit.

Still a third activity of the Information Center has been the preparation and publication of socioeconomic profiles of each county in the United States. In addition to the physical, economic and social data presented (unfortunately only partially documented by source in the sample made available to us) each profile contains comparisons with national and state experience, in an attempt to get at indicators of strengths and weaknesses. The current effort with these county profiles is even more ambitious--to blend their "problem definitions" with the previously published information on programs already underway or available, in order to determine shortfalls or averages and provide guidance, where needed for the redirection of activity. Also, the Center is exploring the possibility of selecting about 100 counties which are not now participating in Federal programs as much as they should be, and, with the consent and assistance of their State governments, to offer the assistance of an individual who will aid the county in the formulation of applications for grants and other findings.

Further information on the Federal Information Exchange System, or reports from the system, may be obtained by contacting the Office of Economic Opportunity, Information Center, 1200 19th Street, N. W., Washington, D. C. 20506. Telephone contact may be made at Area Code 202, 382-7417. (SK)

314. FEDERAL-STATE COOPERATIVE PLAN FOR LOCAL POPULATION ESTIMATES

Meetings with representatives of the various States were held at the Bureau of the Census during the past several months to discuss the feasibility, desirability, and means of establishing a Federal-State cooperative plan for local population estimates. The basic objective of the plan is to encourage States to prepare county population estimates on a regular basis by recommended, preferred methods, mutually agreed upon by the States and the Bureau of the Census. The estimates would be consistent with (and tied in with) State totals now published by the Census Bureau. These estimates would be accepted by the Bureau of the Census and recommended for use by various Federal, State, and local programs requiring such estimates. The Bureau of the Census would publish these local estimates in lieu of any competing or conflicting estimates.

As a first step, a large-scale evaluation and testing program would be undertaken in which the States would prepare county estimates by alternative procedures to be tested against the 1970 Census results. The results of the evaluation and testing program would provide the basis for selecting methods to be used in the cooperative program during the 1970's.

The State representatives were strongly in favor of the proposed plan and indicated a general willingness to participate, particularly in the first phase involving the testing program for 1970. To date, 22 States are officially participating in the program. The first "workshop" meeting was held with the designated technical staffs of some of the States. These meetings are planned to establish criteria, qualifications, operational ground rules, and the step-by-step mechanics of methods to be used. Additional workshop sessions are planned to cover all States in the program. The States agreeing to participate in the program to date are: Arizona, Arkansas, California, Colorado, Florida, Illinois, Iowa, Louisiana, Massachusetts,

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Michigan, Minnesota, Nevada, New Hampshire, New Jersey, New York, North Carolina, Oklahoma, Pennsylvania, Vermont, Virginia, West Virginia, and Wisconsin. (SDA)

315. DATA ACCESS AND USE LABORATORY, U. S. BUREAU OF THE CENSUS

Problems of data access are receiving increased attention at the Census Bureau with the recent establishment of the Data Access and Use Laboratory. The Laboratory, under the direction of John C. Beresford, is undertaking a variety of activities which should substantially improve the Bureau's ability to provide better service to a growing number of users. These efforts are presently concentrated on the development of procedures and techniques which will facilitate the quick and inexpensive retrieval of data resulting from the 1970 Decennial Census. These efforts are also focused on the development of applications of census data to user and public needs.

For example, planning is now underway for the production of a special summary tape for release late in 1970 which will provide geographic and population data for use in dealing with the problems of apportioning congressional districts, state legislatures, and other special districts.

Another major project now in progress is the development of a software system designed to create a capacity for statistical description and preparation of interpretive and comparative reports by computer. Such a system would have many applications. One application--the production of a general descriptive and comparative report for small areas--is now being tested. Reports will be produced for tracts in New Haven, based on the 1967 Test Census taken there.

Other projects will lead to the further development of reference guides to the unpublished data available and to the creation of facilities for more effective guidance, consultation, and training in the use of the data.

It is apparent that if the Laboratory is to be successful in improving the accessibility of census data, knowledge of the users of those data, their needs and plans must be obtained. Comments and suggestions concerning Data Access and Use Lab activities and developments will be welcomed. These may

be addressed to Mr. John C. Beresford, Bureau of the Census, Washington, D. C. 20233. (SDA)

316. DATA ACCESS DESCRIPTIONS, U. S. BUREAU OF THE CENSUS

The Bureau of the Census has initiated a series of "Data Access Descriptions" intended as introductions to means of access to unpublished data of the Bureau, for persons with data requirements not fully met by the published reports.

The first, Matching Studies Series (MS-1), Obtaining Census Statistics for a Selected Group of Persons, describes the procedures the Census Bureau has developed for receiving lists of names and addresses from sponsoring organizations, finding the census records which match these names and addresses, and preparing statistical summaries of the census characteristics for the entire list. The confidentiality of replies to census questions is preserved because, although the sponsoring organization pays for the service, all work with the lists is done at the Census Bureau and the sponsor never obtains access to census returns for individuals on the lists. The steps a sponsor would take to obtain the service are specified. Most of this first Data Access Description is devoted to the possibilities for computer matching of addresses after the 1970 Census for the portion of the population enumerated by mail.

A second, Address Coding Guide and Register: General Applications (AAC-1), is in the "Automated Address Coding Guide and Data Retrieval" series. This Data Access Description describes the creation of the Address Register and the associated Address Coding Guide and their use in sampling, records retrieval, and obtaining greater flexibility in summarizing data at the small-area level.

Other Data Access Descriptions will be released soon on general Bureau policy regarding data access and special services and on costs of data access. More are planned on other aspects of the use of the Bureau's unpublished data, for example, possibilities for special tabulations of data from particular censuses, geographic coding by computer, and computer tape compatibility problems.

They are prepared essentially to provide convenient answers to questions which are received

by the Census Bureau staff with increasing frequency as more and more organizations acquire data-processing facilities and then begin to explore the possibilities of making use of the Bureau's data for particular research purposes.

Persons wishing to be placed on the mailing list to receive Data Access Descriptions should write to John C. Beresford, Bureau of the Census, Washington, D. C. 20233. (SDA)

Bibliographies

317. 1967 METROPOLITAN SURVEYS

Graduate School of Public Affairs, State University of New York at Albany, 179 Part-ridge Street, Albany, New York 12203. 1967. 104 pp.

The latest in this annual series, this volume lists 632 state, interstate, national, and foreign studies which are in process or have been completed since April, 1966. Questionnaires were sent to bureaus of government research at universities, state legislative councils, state municipal leagues and the mayor of the central city in each of the 231 SMSA's. Information on each study includes title, sponsor, date initiated, expected completion, program and mailing address. (ML)

318. URBAN REAL ESTATE RESEARCH--1965

Mrs. Gene L. Tweraser, Urban Land Institute, 1200 18th Street, N. W., Washington, D. C. 20036. \$4.00 per copy to non-members and \$2.00 per copy to members and libraries.

The eighth in a series of annotated bibliographies that cover urban research conducted during the past two decades. In addition to the major portion of the book, which is devoted to annotation on research in such fields as the central business district, redevelopment and renewal, the author points out what she feels are some of the current problems in the urban research field. (ML)

319. A DIRECTORY OF URBAN RESEARCH STUDY CENTERS

Materials prepared by the Committee Staff for the Sub-Committee on Urban Affairs of the Joint Economic Committee, Congress of the United States, U. S. Government Printing Office, Washington, D. C. 20402. August, 1967, 77 pp. \$.25 per copy.

A directory of urban research study centers designed to provide information on the activities of the variety of centers engaged in urban studies. Two types of organizations have been included in the directory: university sponsored study centers and non-profit research institutes. An index of the universities by State has been provided so that those desiring information about a particular region may contact the universities in the area. (ML)

320. URBAN PLANNING AND DEVELOPMENT CENTERS IN LATIN AMERICA

Report of a study tour by James H. Street and Guida G. Weigend, Rutgers - The State University, New Brunswick, New Jersey, 1967, 97 pp.

This study contains condensed descriptions of the centers where significant activity in the field of urban studies and development is going on in Latin America. It lists centers by country and includes their history and objectives, current and past research, technical assistance and teaching functions, publications, and completed projects. (ML)

321. APPALACHIAN BIBLIOGRAPHY

Compiled for the Appalachian Regional Commission by the West Virginia University Library, Morgantown, West Virginia, 1967, 582 pp.

Around 4,500 items, partially annotated, arranged under more than 300 subject headings. (SK)

322. REGIONAL RESEARCH INDEX, CINCINNATI METROPOLITAN AREA

Stephen J. McHugh and Siegbert Schacknies. Urban Data Center, University of Cincinnati,

BRIEF MENTION

Cincinnati, Ohio 45221. 121 pp.

A computer generated, annotated listing of more than 400 plans and study reports relating to Cincinnati and vicinity and completed between 1955 and 1967. Also contains Key Word and Author indexes. (SK)

323. SURVEY OF CURRENT STRUCTURAL RESEARCH

"Survey of Current Structural Research," Journal of the Structural Division, Proceedings of the American Society of Civil Engineers, Vol. 91, No. ST 1, February, 1965, 102 pp.

Prepared by a survey committee at Lehigh University for ASCE's Structural Division Research Committee, this bibliography contains some 729 items classified in seven major categories--analysis and design of structures; electronic computation; masonry and reinforced concrete; metals; nuclear structures and materials; wood; and plastics. Also contains institutional and subject indexes. (SK)

New Periodicals

324. CITY

A bi-monthly initiated by Urban America, Inc. in April, 1967. In addition to the four issues which have come out to date, a supplement dealing with last summer's conference in Washington sponsored by Urban America and several other organizations, entitled "Urban Coalition: Turning the Country Around," has been distributed. Subscriptions are \$5.00 per year. Inquiries should be addressed to Urban America, Inc. at 1717 Massachusetts Avenue, N. W., Washington, D. C. 20036. (ML)

325. TRENDS

A new publication of the American Society of Planning Officials, to be published three or four times a year, Trends presents commissioned articles on issues, legislation, policies and techniques of significance in the planning field. Circulation will be to ASPO members and Planning Advisory Service subscribers. Further information can be

obtained from the American Society of Planning Officials, 1313 East 60th Street, Chicago, Illinois 60637. (ML)

326. JOURNAL OF URBAN LAW

Previously the University of Detroit Law Journal, this new legal quarterly has been initiated because of an awareness of the tremendous growth of the urban community and its concomitant legal problems. The journal will provide a scholarly, yet useful, study of urban law questions and will explore the many problems that beset the urban attorney. Subscriptions are \$5.00 per year. Requests should be made to Journal of Urban Law, 651 East Jefferson, Detroit, Michigan 48226. (ML)

327. OUTDOOR RECREATION

A new quarterly publication of the Bureau of Outdoor Recreation in the Department of the Interior. It reports major governmental and private actions affecting outdoor recreation, natural beauty and conservation. It will help keep professional, public, and private leaders in outdoor recreation abreast of significant developments. Subscriptions are \$1.50 per year from the Superintendent of Documents, Government Printing Office, Washington, D. C. 20402. (ML)

328. NEWS: SERVICE TO REGIONAL COUNCILS

A newsletter prepared and distributed by the National Service to Regional Councils under the joint sponsorship of the National Association of Counties and the National League of Cities. Assisting the National Service in its activities is a fifteen man advisory committee which includes council staff directors, and representatives of state leagues of municipalities, county associations and state government. Further information can be obtained from the National Service to Regional Councils at 1725 K Street, N. W., Washington, D. C. 20006. (SK)

329. URBAN AFFAIRS ANNUAL REVIEWS

Annual reference volumes designed to present critical analyses of current interest prepared by experts in various fields of urban studies and covering--over the years--programs, policies and current developments in all areas of concern to urban specialists. Assisting in the effort is an International Editorial Advisory Board of twenty members. Volume I, Urban Research and Policy Planning, edited by Leo F. Schnore and Henry Fagin, both of the University of Wisconsin (640 pages, \$20 net) is currently available. Volumes II and III, dealing with Power, Deprivation and Urban Policy and The Quality of Urban Life, respectively, will each be edited by Henry J. Schmandt and Warner Bloomberg, Jr., both of the Department of Urban Affairs at the University of Wisconsin's Milwaukee Campus. Inquiries concerning these publications should be addressed to Sage Publications, Inc., 275 South Beverly Drive, Beverly Hills, California 90212. (ML)

and water pollution, environmental noise and the experimental city, as well as the use of pesticides, and peaceful and military uses of nuclear energy. It is published ten times a year by the Greater St. Louis Citizens Committee for Nuclear Information, 5144 Delmar Boulevard, St. Louis, Missouri 63108. Subscriptions are \$5.00 for one year, \$9.00 for two years, with a special rate of \$2.50 per year for students. (ML)

330. THE ANNUAL OF THE WESTERN REGIONAL SCIENCE ASSOCIATION

A new periodical in the inter-disciplinary field of regional development. It will contain articles and recent research on such areas as resource utilization, regional planning and environmental quality. The publication will be issued annually at the rate of \$5.00 per year. All correspondence should be sent to the Editor of The Annual, Michael K. Mischaikow, Department of Economics, Western Washington State College, Bellingham, Washington 98225. (ML)

331. APPALACHIA

A monthly journal inaugurated in September, 1967, dealing with problems of the development of this region. Published by the Appalachian Regional Commission and edited by Thelma C. Stevens. Inquiries should be addressed to the Commission at 1686 Connecticut Avenue, N. W., Washington, D. C. 20235. (SK)

332. SCIENTIST AND CITIZEN

A publication which deals with scientific problems of our nuclear age, including air

EUROPE, ASIA, AFRICA, AND LATIN AMERICA

I. PHYSICAL ENVIRONMENT

Air

333. EFFECTS OF AIR POLLUTION ON JAPANESE CIVILIAN POPULATION

(a) H. Sasamoto. (b) In process. (c) Keio University, School of Medicine (Tokyo), in cooperation with the U. S. Army Hospital, Camp Zama, Japan, under sponsorship of U. S. Army. (d) None.

Problem. Through intensive physiological investigation, determine the effects of air pollution upon the pulmonary functions of Japanese civilians; evaluate various treatments to be given for air-borne diseases such as acute episodes of bronchitis, chronic bronchitis, and pulmonary emphysema.

Method. Pulmonary function tests, plethysmographic studies to evaluate the mechanics of breathing, and gas chromatographic studies on the inert gas washout from the lungs to evaluate the alveolar functions will be conducted on the Japanese civilian inhabitants living in the air polluted area. AD-DN2 and the compartmental analysis of ventilation perfusion distribution will be made to study the impaired alveolar functions. (SIE)

II. DEMOGRAPHY AND HUMAN BEHAVIOR

Population Characteristics

334. FERTILITY IN BOGOTA, COLOMBIA

(a) Gerard Frinking. (b) Five-month project, to be completed by late summer, 1967. (c) Center for Social Research, Bogota, Colombia. For information, contact investigator at Centro de Investigaciones Sociales, Colle 16, No. 4-75, Bogota, Colombia. (d) None.

Problem. Analysis of the level and tendencies of fertility according to selected socio-economic and cultural characteristics. (ECM)

Labor Force, Employment, and Unemployment

335. EMPLOYMENT AND UNEMPLOYMENT IN MEDELLIN AND NEIGHBORING MUNICIPALITIES

(a) Esteban Posada. (b) Continuing project, initiated in 1965. (c) University of Antioquia, Colombia, Center for Economic Research, under sponsorship of Ford Foundation. For information, contact investigator at Centro de Investigaciones Economicas, Universidad de Antioquia, Colle 48, No. 43-7, Medellin, Colombia. (d) None.

Problem. Preparation of indexes of unemployment in Medellin, Bello, Copacabana, Envigado, Itagui, Caldas, and La Estrella. (ECM)

The Family

336. CHANGES IN THE COLOMBIAN FAMILY

(a) Virginia Gutierrez de Pineda. (b) Eight-month study to be completed by fall of 1967. (c) University of Notre Dame (United States), Center for Social Research. For information, contact investigator at Colle 16, No. 4-75, Bogota, Colombia. (d) None.

Problem. A pilot study of changes in the Colombian family in the light of demographic, ecological, religious, economic, educational, and health considerations, as well as community life and family processes. (ECM)

Migration

337. MIGRATION PATTERNS AND POPULATION DISTRIBUTION (YUGOSLAVIA)

(a) Reid Reynolds, A. Rogers, and S. Kranjec. (b) In process. (c) The American-Yugoslav Project, initiated by the Urbanisticni institut of Slovenia

and Cornell University, under sponsorship of Ford Foundation, U. S. Department of State, and Yugoslav Federal Council for the Coordination of Scientific Research. For information, contact Zora Debenak, Urbanisticni institut, Titova 98/II, pp. 346, Ljubljana, Yugoslavia. (d) None.

Problem. Analyze migration patterns and population distribution.

Method. There exists for all of Slovenia a migration registration system which collects data on place of origin, destination, and personal characteristics for migrants for recent years. After processing data by standardized areas, the investigators will attempt to fit it to a modified gravity model. Because occupational data are included, it is hoped the results of the study can be related to the changing pattern of the regional economy. (RTR)

338. REGIONAL POPULATION REDISTRIBUTION
(SWEDEN)

(a) Claes-Fredrik Claeson. (b) In process. Publication planned for 1968. (c) University of Goteborg, Sweden, Department of Human Geography. (d) None.

Problem. The pattern of population change and redistribution with special reference to the regional central place system.

Method. (1) Compare the population distribution for the census years 1950 and 1960 in the County of Kronoberg. The individuals of the population registers have been provided with coordinates to adjust the material to spatial analysis by means of computer programs. (2) Study the migration pattern in 1960 in the same area. For this regional analysis, the individuals of the total migrant population with place of origin in the county have been given coordinates indicating the place of origin and the place of destination. Rural places of origin and destination are defined by means of the one-sq. km. grid system of the population map. (OW)

339. MIGRATION FROM SPARSELY POPULATED
COMMUNITIES (NORWAY)

(a) Arne S. Dolven. (b) Completion expected in 1968. Findings to date reported by the investigator in

"Aurskog-Holand, A Sociological Study," Oslo, Utvalg for byplanforskning, Report No. 1, 1965 (Norwegian only). A research report, "Reactions in Hypothetical and Actual Situations," to be published in Journal of the American Institute of Planners. (c) Norwegian Institute of Urban and Regional Research. (d) None.

Problem. To determine: (1) the main reasons for migration from small, sparsely populated communities towards the central urban areas in Norway; (2) in what respect this movement is connected with livability in these communities, and to what degree livability is declining as the migration process continues; (3) how far from the various types of centers people are willing to live in the future.

Hypotheses. Livability is higher in sparsely populated communities than usually thought. Migration is due to lack of working opportunities more than a feeling of isolation and low livability.

Method. Case studies are being conducted in three sparsely populated communities--Aurskog-Holand in Eastern Norway, Ytre Senja in Northern Norway, and Haegebostad in Southern Norway. A sample of the population in these communities and a sample of migrators from Aurskog-Holand to Oslo are being interviewed. (TFR)

340. MIGRATION WITHIN TOWN REGIONS
(NORWAY)

(a) Signe Elisabeth Schilbred. (b) A dissertation for the Magister Artium Degree to be completed spring of 1968. A more detailed report to be available later. (c) Norwegian Institute of Urban and Regional Research. (d) None.

Problem. To study how migration and natural increase simultaneously contribute to changes in internal differentiation of the structure of population within the defined town regions.

Method. Migrations between municipalities within the town region have been observed and analyzed by use of Marko chains. (TFR)

341. INTERNAL MIGRATION AND INTERREGIONAL SOCIOECONOMIC DIFFERENTIATION (PUERTO RICO)

(a) Mario Robirosa. (b) In process. (c) Center for Urban and Regional Studies, Buenos Aires, Argentina. For information, contact Centro de Estudios Urbanos y Regionales, Asociado al Instituto Torcuato Di Tella, Virrey del Pino 3257, Buenos Aires. (d) None.

Problem. A study of internal migration in Puerto Rico between 1955 and 1960.

Method. Sources of migration data are special tabulations of the 1960 Population Census, which describe the migratory flow between each pair of municipalities (76 municipalities). Socioeconomic data comes from official census and statistics for 1960 and 1950. In order to exclude from the definition of migration simple change of residence, 14 migrational areas were determined, each of them composed of adjacent municipalities which reacted homogeneously to internal migrations between 1955 and 1960. Only movements between these areas were considered as migrations. (JH)

342. MIGRATION AND URBANIZATION IN BOGOTA (COLOMBIA)

(a) Fernan Torres Leon. (b) Completion expected in 1967. (c) University of Bogota, Colombia, Faculty of Economic Science. For information, contact Departamento de Investigaciones Cientificas, Universidad de Bogota, Bogota, Colombia. (d) None.

Problem. A study of the volume and character of migration to Bogota and the subsequent adaptation of the migrants. (ECM)

Urbanization

343. STUDIES OF URBAN DEVELOPMENT IN WESTERN EUROPE AND NORTH AMERICA

(a) W. William-Olsson, Gunnar Alexandersson, and Leif Ahnstrom. (b) A long-term project in process. Published materials to date include William-Olsson, Economic Map of Europe, 1952; Alexandersson, Industrial Structure of

American Cities, 1956; Alexandersson and Norstrom, World Shipping (Harbors and Waterborne Transport), 1963; Alexandersson, Geography of Manufacturing (Maps of urban places in Western Europe and North America), 1967. In preparation or in press, William-Olsson (ed.), Atlas of the United States (containing maps of urban places and urban industries), prepared for the Twentieth Century Fund; Ahnstrom, Political and Economic Leadership in Western Europe: A Study of Its Economic Geography; Alexandersson, with Nyberg and Viotti, Daily Newspapers in Western Europe by Place of Publication. (c) Stockholm School of Economics. (d) None.

Problem. Gather data and prepare materials necessary for the comprehensive urban planning of an United Europe. Nearly all academic studies and government reports in European countries are confined to their national boundaries. Detailed studies that extend beyond respective national boundaries are rare. For private and official planning within the context of an United Europe, it is essential to have detailed and at the same time comprehensive maps of urban places and urban functions for all of Europe.

Hypothesis. With their complex historic background, European countries have strikingly different patterns of urban places and urban functions. It is assumed that the same maps for the United States will provide the most relevant pattern of reference for a prediction of development trends in an United Europe.

Method. Mostly cartographic analysis, but where relevant, verbal and statistical approach, too. (GA)

344. METROPOLITAN AREAS IN SWEDEN

(a) Maj Ohre. (b) A project in two parts. Part I completed. Findings published in "Folkmangdsforandring och stadstillvaxt. En studie av stora och medelstora stadsregioner" (Population Growth and Urban Sprawl. A Study of Large and Medium-Size City Regions in Sweden), Geografiska Regionstudier, No. 5, Uppsala, 1968 (with English summary). Part II in process. Publication scheduled for winter of 1968-69. (c) University of Uppsala, Department of Human Geography,

with support from Riksbankens Jubileumsfond. (d) None.

Problem. Part I: To explain the spatial variation of the population growth within large and medium-size city regions in Sweden through the use of a set of variables related to population growth. Part II: To develop procedures for the delimitation of metropolitan areas in Sweden.

Previous Research. "Fororter i Malar-Hjalmarmaromradet," (Suburbs in the Malar-Hjalmarmar Region), *Geografiska Regionstudier*, No. 3, Uppsala, 1966 (with English summary).

Hypothesis. Part I: Population growth within large and medium-size city regions in Sweden is a function of distance to the center, degree of industrialization, rate of residential construction, and socioeconomic characteristics.

Method. Part I: Multiple regression analysis; Part II: Factor analysis.

Findings. Part I: About two-thirds of the spatial variation of the population growth within large and medium-size city regions in Sweden could be accounted for by the studied variables. Rate of residential construction was the independent variable that contributed most to the explanation of the population growth. (MO)

345. URBAN ALLOMETRIC GROWTH AND DELIMITATION OF URBANIZED AREAS (SWEDEN)

(a) Stig Nordbeck. (b) In process. Findings published in Stig Nordbeck, *The Law of Allometric Growth*, 1965; Stig Nordbeck and Gengt Rystedt, *Computer Cartography: Point in Polygon Programs*, 1967. (c) University of Lund, Department of Human and Economic Geography, with support from The National Swedish Council for Building Research. (d) None.

Problem. To find a data processing system for delimiting urbanized areas by means of population densities and urban functions and determine the size of the built-up area as a function of its population or vice versa.

Method. The Swedish Real Estate Register Committee proposes that the location of every Swedish estate be given in the official real estate register by the coordinates of central

points belonging to each estate. The coordinates are used when a computer constructs a map showing the distribution of the population. Then it gives the boundary of the urbanized area as a polygon and computes the area and population of this polygon. The allometric growth formula $y = a.x^b$ is applied to the size of the built-up area (y) and the population (x). (BR)

346. URBAN REGIONS AS SPATIAL SYSTEMS (SWEDEN)

(a) Sven Godlund and Olof Warneryd. (b) In process. Four papers have been published in a series called *Urbaniserings-processen* (The Urbanization Process). One is in English and available free of charge. (c) University of Goteborg, Department of Human Geography, with support from the Tri-Centennial Fund of the Bank of Sweden. (d) None.

Problem. To investigate interaction, interdependence, and the communication system within and between urbanized regions in Sweden as a background for the study of the urbanization process.

Hypotheses. (1) Growth of a particular place or region affects not only the economy of that place, itself, but also that of other places, especially those which belong to the higher levels of the same hierarchical structure; (2) development of the communication system influences the position of a city or a region in the spatial system.

Method. The investigation begins with a study of the urbanized regions as objects in spatial systems. Identification of the relations in these systems is based on the concepts of interaction and interdependence. Data about interaction are being collected from both public and private organizations and data about interdependence derived from analysis of the spatial structure of these organizations.

Findings. To a large degree, institutional conditions steer the individual behavior in space, and the hierarchical constructions of public and private organizations are strong regulators of urban growth. (OW)

347. SPATIAL SYSTEMS OF ADMINISTRATIVE AREAS (SWEDEN)

(a) David Hannerberg, Sven-Olof Lindqvist, and Thomas Lunden. (b) In process. A few discussion papers concerning the historical aspects of the project have been issued. (c) University of Stockholm, Department of Human Geography, with financial support from the Tri-Centennial Fund of the Bank of Sweden. (d) None.

Problem. To investigate the meaning and impact of various kinds of administrative boundaries during different historical periods, including the present.

Method. For study of the contemporary period, the pattern of influence areas (e.g., retail market areas) is compared with that of administrative areas. Regions with discrepancies between administrative division and pattern of spatial interaction are studied in detail. The area being studied is the Province of Orebro in Central Sweden. (DH)

348. POPULATION THRESHOLDS FOR JOB OPPORTUNITIES, EDUCATIONAL ESTABLISHMENTS, AND SERVICES (SWEDEN)

(a) Torsten Hagerstrand. (b) Long-term study in process. Partial results are available. (c) University of Lund, Department of Human and Economic Geography, with support from The Swedish Council for Social Science Research. (d) None.

Problem. To provide quantitative measurements of how the choice for education and work possibilities open to young individuals, in particular, varies within the country according to place of residence. An attempt will be made to determine the approximate threshold in terms of population in a commuter district before a considerable proportion of young people are obliged to migrate. This should make it possible to elucidate the relationship between level of training and urbanization. One should be able to determine which size of region offers opportunities for the individual, chiefly in training, labor market, and service, that essentially correspond to what might be termed the standard of Swedish aims.

Method. The first phase consists of mapping the total population and some service functions by means of coordinates in a square net system. (IL)

349. METROPOLITAN GROWTH, COMMUTING, AND URBANIZATION IN THE OSLO AREA (NORWAY)

(a) Tor Fr. Rasmussen. (b) Completed and published in Oslo, 1966. 300 pp. In Norwegian with 20-page English summary. Two articles based on the book published by the investigator in English are "Commuting in the Oslo Area," Proceedings of the First Scandinavian-Polish Regional Science Seminar, The Polish Academy of Sciences, Studies Vol. XVII, pp. 107-132, Warszawa, 1967; and "The Development of a Planned Plurinuclear City Region: Greater Oslo," Regional Science Association, Papers, Vol. XVI, 1965. (c) Norwegian Institute of Urban and Regional Research. (d) None.

Problem. Commuters were enumerated over a wide area by aid of previously unused data from the census forms. Distinct borderlines for the commuting field could not easily be found because of the successive commuting. Within the Oslo dominated commuting field several smaller incommuting places were found that attracted people from farther distances and even from the Oslo city itself, resulting in a criss-cross pattern of commuting over a wide area gravitating to Oslo. A plurinuclear structure for employment areas was identified within the Oslo commuting field. This structure is further discussed as a model for planning in metropolitan areas. (TFR)

350. NORWEGIAN TOWN REGIONS

(a) Tor Fr. Rasmussen. (b) In process. First report to be published February, 1968. (c) Norwegian Institute of Urban and Regional Research. (d) None.

Problem. To study the process of concentration in Norwegian settlement by identifying the urbanized areas which absorb population growth. Urbanization in Norway has been studied previously through the concept of "agglomerated urban settlements." This study uses a wider concept, including people living in the urban fringe outside the clusters.

Hypothesis. The process of concentration to the largest urban settlements cannot be stopped. One may establish a balance in the number of population among the largest urban areas, which may give a certain degree of stability.

Findings. The term regional concentration of population is used for settlements with more than 10,000 inhabitants with a rate of increase above the national level. It was in 34 such town regions (of which 23 had above 20,000 inhabitants and four above 100,000 inhabitants) that the whole population increase between 1950 and 1960 occurred. An analysis of the processes involved in the concentration of population supports the hypothesis about a continued concentration in ten to fifteen larger town regions. (TFR)

351. THE CITY OF THE FUTURE

(a) Myrto Bogdanou and others. (b) Continuing project, initiated in 1960. For the most recent reports, see "Megalopolis in Japan," C. Nagashima; "Megalopolis Trends in Mexico," G. Luna; "Ecumenopolis Trends in South Europe," and "Projections of Economic Variables for Ecumenopolis," J. Papaioannou, all in Ekistics, July, 1967 (Vol. 24, No. 140). Earlier reports have appeared in Ekistics for July, 1965 (Vol. 20, No. 116) and July, 1966 (Vol. 22, No. 128). (c) Athens Center of Ekistics, under sponsorship of Athens Technological Institute, Doxiades Associates, and the Ford Foundation. (d) None.

Problem. This project studies the largest scale of human settlements and is mainly concerned with long-range future projections of urban development. It postulates a new era of dynamic balance to be reached a century from now, "ecumenopolis," a world-wide urbanization pattern, following a "megalopolitan era" with more and larger megalopolises than the ones already emerging. The approach tends to synthesize a considerable number of partial aspects into a total picture on the basis of an ad hoc evolved methodology.

In addition to studies already reported on, work is proceeding on projections for northern Europe (Joseph Verbaudhede) and Australia (John Bayley and George Clarke). Several

studies of habitability are also being made, including densities and water distribution (Takasgi Doi and M. G. Ionides), climate (John Papaioannou) and topography (L. Stylianopoulos). (SK)

352. THE CAPITAL OF GREECE

(a) G. Papageorgiou. (b) A continuing project, first reported on at length in a book entitled Our Capital and Its Future published in 1960. Recent work has concentrated on the preparation of a second book revising and extending this earlier publication and drawing attention to changes over the intervening years, and is reported on in "Growth of the Capital of Greece," and "Changes in the Capital of Greece," both by G. Papageorgiou and appearing in Ekistics, July, 1967 (Vol. 24, No. 140). See also "Air Pollution in Greece," by J. Papaioannou, in the same issue. Earlier reports have appeared in Ekistics for August, 1965 (Vol. 20, No. 117) and July, 1966 (Vol. 22, No. 128). (c) Athens Center for Ekistics, under the sponsorship of the Athens Technological Institute, Doxiades Associates and the Ford Foundation. (d) None.

Problem. This project explores the "intermediate" metropolitan scale by concentrating on one particular case (Athens), studying its growth and structure, as well as alternative future possibilities. It also compares this case with a number of other metropolises in the range of 1.5 to 5 million inhabitants, and in a variety of cultural settings, development levels, etc., in order to distinguish those features that seem to characterize Athens exclusively from those of a wider or universal coverage.

In addition to the work mentioned above, further studies have been undertaken on densities and on substandard and overcrowded housing. (SK)

353. THE HUMAN COMMUNITY (GREECE)

(a) Petros Pappas. (b) A continuing project, initiated in 1961. Recent reports include "Study of Satisfactoriness of Communities: Effects of Education, Income, Sex" by J. Virirakis

and "Time Allocation Study in Eighteen Athens Communities" by P. Pappas, both in Ekistics, July, 1967 (Vol. 24, No. 140). An article was published last year entitled "Neighborhoods and Neighboring" by Susan Keller, a revised version of which has now been published in book form by Random House, New York, New York. (c) Athens Technological Center, under sponsorship of Athens Technological Institute, Doxiades Associates and the Ford Foundation. (d) None.

Problem. This project focusses on the largest urban sub-unit, usually of a scale of 6-15,000 inhabitants, which still remains at the human scale and is thus suited to preserve human values. Again the examples are taken from Athens.

Method. Field survey, including a questionnaire covering 5,000 respondents in 18 Athens neighborhoods. Interdisciplinary comparisons with similar neighborhoods from other metropolises throughout the world. (SK)

354. COMPILATION OF PRIMARY SOURCES ON ARGENTINE CITIES

- (a) Jorge E. Hardoy and Luis A. Romero.
- (b) In process. (c) Center for Urban and Regional Studies, Buenos Aires. For information, contact Centro de Estudios Urbanos y Regionales, asociado al Instituto Torcuato di Tella, Virrey del Pino 3257, Buenos Aires.
- (d) None.

Problem. Compile written, cartographic, and iconographic sources referring to Argentine cities, from their early beginnings to 1869 when the first population census was taken, as source material for determining their physical aspect, institutional and social structure, and economic base. (JH)

355. URBAN SCALES AND FUNCTIONS IN SPANISH AMERICA AROUND 1600

- (a) Jorge E. Hardoy and Carmen Aronovich. (b) In process. The methodology of the study was presented at the Seminar of Social and Economic History sponsored by IDES in August, 1966, and is to be published by the Latin American Research Review. First findings presented at the XXXVII International

Congress of Americanists, Mar del Plata, September, 1966, and are to be published by the Proceedings of the Congress. (c) Center for Urban and Regional Studies. For information, contact Centro de Estudios Urbanos y Regionales asociado al Instituto Torcuato Di Tella, Virrey del Pino 3257, Buenos Aires. (d) None.

Problem. Determine the characteristics of the urbanization process in a particular moment of the colonial period in Hispanic America.

Method. A matrix was built with indicators of administrative, economic, religious, education, and sanitary type, extracted preferably from primary sources and complemented with information gathered from secondary sources. A period of approximately fifty years was studied. Correlations between urban centers have been made, grouping them according to rank and to each function. (JH)

Social Organization

356. INTERRELATION BETWEEN ECONOMIC AND SOCIAL GROWTH FACTORS

- (a) Nancy Baster and Muthu Subramanian.
- (b) In process. Pilot study completed and published in 1965 as Report No. 1: Aspects of Social and Economic Growth. A Pilot Statistical Study. Available in English and French. A second study completed and published in 1967 as Report No. 8: Social and Economic Growth: Growth Patterns and Productivity Effect. (c) United Nations Research Institute for Social Development. (d) None.

Problem. The project began with a pilot study, a statistical study covering the development of some social and economic factors in eighteen developing countries. The study focussed on the relationships: (1) between the 1950 levels of health and education on the one hand and economic growth during 1950-1960 on the other hand; (2) between economic growth during 1950-1960 and the levels of health and education in 1960; and (3) among the selected social factors, themselves.

A second study followed. In the first part of the follow up study, 52 countries were included, in the second part, 29 countries.

As far as possible, the analyses were made separately for the groups of developed and developing countries. The social factors this time included not only health and education, but also nutrition. While the pilot study only dealt with the relationship between certain social levels at a point of time (1950 and 1960) and subsequent or preceding rates of economic growth, the second study aimed first at shedding light on the different growth patterns of the economic and social factors included in the study, and second, at measuring the effect of the social factors on economic growth (the "productivity effect" of social factors).

To test the concept of the "social-economic profile" developed in the pilot study, three additional studies were initiated: (1) A cross-country study based on 1960 data of some 25 variables for seventy to eighty countries. It will try to compare the relative levels of social and economic development in different countries on more than one criterion and study the relationships between these relative levels themselves and between them and the rates of economic growth in subsequent years. (2) A study in time depth for a number of developed countries. Assuming that for these countries data for social and economic indicators are available for certain points of time between 1870 and 1930, a cross-country study will be carried out for each of these points. Thus, a sequence of cross-country studies will become available which may provide valuable insights into the process of development. (3) A number of country studies are being carried out in order to shed more light on the mechanisms underlying the interaction between levels of living and economic growth and on the role of structural factors in these processes. A number of countries in different parts of the world have been selected, as far as possible including countries which appear from the pilot study to illustrate different patterns of development.

Findings. Because of the limited number of countries included in the pilot study and the limited coverage of the data, the findings of the study are very tentative. The study did indicate that there is a tendency for the health and education indicators to move together in the development process, thus confirming a hypothesis already mentioned in the 1961 Report on the World Social Situation. Another finding emerging from the report was that among the eighteen countries considered, those that in 1950 had

a relatively high level of social development (or "social level") in comparison to their level of economic development, seemed to have been able to grow more rapidly economically in the subsequent decade than the others. This pointed in the direction of a certain "productivity effect" of the social factors.

The second study seems to confirm that social factors like health, nutrition, and education make a substantial contribution towards the explanation of variations in economic growth, even when investment and labor force are taken into account. It also indicates that there are, in this respect, differences among the developing countries and that in the countries in the middle range of income, the influence of the social variables varies from that in both the least developed and the most developed groups. (GL-L)

357. THE SOCIAL THRESHOLDS: PATTERNS
ASSOCIATED WITH ECONOMIC GROWTH

(a) Simone Clemhout. (b) Completed. Publication under above title as Report No. 7 expected by late 1967. (c) United Nations Research Institute for Social Development. (d) None.

Problem. On several occasions, in the Institute's work and in that of others, the hypothesis was advanced that at certain levels of development significant changes occur in the functional relationships between economic growth and various indicators of levels of living. This hypothesis about the existence of "critical levels" or thresholds of development has been the object of this study. (GL-L)

358. OCCUPATION OF LEISURE TIME AND WAY
OF LIFE IN AN URBAN MILIEU (FRANCE)

(a) Maurice Imbert. (b) In process. (c) National Ministry of Education, Center of Social Ethnology and Social Psychology, Paris. (d) None.

Problem. Sociological changes in an urban environment, as a general movement, have been rapid and have brought extensive changes, affecting the economic, social, and cultural lives of individuals and groups. In the large urban areas, particularly, these changes occur to an unprecedented degree.

It has given rise to much research concerning ways in which people and social groups adjust to this situation. This project plans to add to this body of knowledge resulting from the research, by investigating the practices, desires, and needs associated with the expenditure of leisure time. Though in some respects similar to other research projects, it differs in its orientation. It takes into consideration the entire array of diverse ways in which leisure time, time free from professional, family, and social obligations, is spent. Another distinguishing feature of the project is that the content analysis will be made, not as an end in itself, but more in order to serve as an indicator, to help delineate the mechanics of adjusting to urban society.

Hypothesis. Activities connected with expenditure of free time are closely identified with the social, economic, and cultural characteristics inherent in the specific way of life of the individual or group. (MI)

359. MULTINATIONAL COMPARATIVE TIME BUDGET PROJECT

(a) Alexander Szalai (Hungarian Academy of Sciences, Budapest, and United Nations Institute for Training and Research, New York) director, in cooperation with the following participants: in Belgium, Pieter Feldheim and Claude Javeau (both of the Institute of Sociology of the Free University of Brussels) and Rudolf Rezsohazy (Institute of Political Science, University of Louvain); in Bulgaria, Zachari Staikov (Sociological Group "pri CSPA," Sofia); in Czechoslovakia, Bedrich Weiner (Laboratory of Industrial Sociology, Technical University of Prague); in Cuba, Juan A. Prohias-Rodriguez (Vice-Rectorate of Scientific Research and International Relations of La Havanna); in the Federal Republic of Germany, Heinrich Ebel and Bernhard von Rosenblatt (both of the Institute for Social Research, University of Munster, Dortmund) and Erwin K. Scheuch and Miss Annerose Schneider (both of the Institute for Comparative Social Research, Cologne); in France, Claude Goguel (National Institute of Statistics and Economic Studies, Paris) and Henri Raymond (Faculty of Letters, Nanterre); in the German Democratic Republic,

Gerhard Lippold and Gunther Manz (both of the Institute for the Planning of Consumption and of the Living Standard, School of Higher Economic Studies, Berlin); in Hungary, Laszlo Cseh-Szombathy and Mrs. Suzanne Ferge, (both of the Hungarian Central Statistical Office) and Karol Varga (Sociological Group, Budapest); in Norway, Dagfin Aas, (Norwegian Building Research Institute, Oslo); in Poland Marian Frank and Mrs. Helena Strzemska (both of the Institute of Labor, Warsaw) and Zygmunt Skorzynski (Institute of Philosophy and Sociology, Academy of Sciences, Warsaw); in the Union of Soviet Socialist Republics, V. D. Patrushev (Institute of Economics and of the Organization of Industrial Production, Academy of Sciences of the USSR, Siberian Branch); in the United States, Philip E. Converse and John Robinson, (both of the Survey Research Center, University of Michigan, Ann Arbor) and Philip Stone (Center for Advanced Study in the Behavioral Sciences, Stanford, California); and in Yugoslavia, Predrag Aleksic, Vlatko Petkovic and Vladimir Raskovic (all of the Institute of Sociology, Belgrade) and Mrs. Katja Boh (Institute of Sociology and Philosophy, University of Ljubljana). (b) This project, initiated in 1964, was discussed at a round table at the Sixth World Congress of Sociology (Evian, September, 1966) which discussions were subsequently fully reprinted in two scientific journals, Etudes et Conjoncture, (September, 1966) and the American Behavioral Scientist (December, 1966). Through the cooperation of Zentralarchiv in Cologne and the Harvard Computation Center cleaning and taping of time budget data from ten countries has been carried out, representing approximately 140,000 cards. Standard analytical tables are being prepared and numerous studies carried out based on these data. A two-volume report is being planned, the first to contain a description of the project; a discussion of methods of time budget analysis and applications; presentation of results of the project; analytic and synoptic source tables; and an up-to-date bibliography. The second volume will be devoted to specialized contributions from the participants. (c) European Coordination Centre for Research and Documentation in the Social Sciences, Franz Josefs Kai 3, Vienna,

Austria, in cooperation with the agencies listed above, under sponsorship of the National Science Foundation (United States) and the Volkswagen Foundation (Federal Republic of Germany). (d) None.

Problem. (1) Study and compare, systematically and on the basis of concrete facts, the changes occurring in various countries in the nature and time distribution of the daily activities of populations, according to the degree of urbanization and industrialization in populated centers and the surrounding areas. (2) Improve and develop methods of drawing up and appraising time budgets. In addition to their theoretical interest these methods are of importance for the organization of both work and leisure time. (3) Promote cooperation and standardization of research techniques and the international exchange of quantitative data between researchers working in the same field, by endeavoring to secure comparable results and, if possible, a common evaluation of those results.

Method. Data on the use of time over a 24-hour period are obtained by interview with a selected sample of respondents in specified age groups living in households wholly or partly dependent on non-agricultural employment. From these data it is possible to define a sequence of "events" characterized by time of occurrence, duration of activity, primary activity, secondary activity, company (i.e. other persons involved), and location. These data, in turn, are used in carrying out studies at three levels: single dimension, multi-dimensional, and daily schedule analyses. (SK)

360. PROJECT METROPOLITAN

(a) Carl-Gunnar Janson. (b) A project initiated in 1964 and scheduled for completion in 1985. First stage nearing completion. Brief report in "Project Metropolitan," Acta Sociologica, 1965. Preliminary reports planned for 1970. A parallel study is being conducted by Kaare Svalastoga, University of Copenhagen. A delinquency study, parallel in part, is being conducted in Tokyo under the direction of Jackson Toby, Rutgers - The State University. (c) Stockholm University, Department of Sociology, with grants from the Tri-Centennial

Fund of the Bank of Sweden. (d) None.

Problem. Study the problems, as they relate to the urban setting, of social stratification and social mobility, especially intergenerational mobility and the role played by the educational system in the mobility process; deviant behavior; mate selection; and mental adjustment.

Hypothesis. Even in the new educational system, educational achievement, evaluation, and selection for higher education are, to some extent, functions of the social position of the family. There are various channels, more or less connected with the educational system, of social mobility.

Method. Conduct a longitudinal study of a cohort of boys and girls growing up in the Stockholm Metropolitan Area. The cohort is to be followed until the age of 30.

361. CURRENT STATE OF KNOWLEDGE ABOUT COLOMBIAN SOCIAL REALITY

(a) Fernando Uribe Restrepo. (b) The study was to be completed in June, 1967. A preliminary 40-page report was published and can be obtained from the Asociacion Nacional de Industriales (ANDI), Edificio La Ceiba, Piso 12, Medellin, Colombia. (c) Asociacion Nacional de Industriales. (d) None.

Problem. A general inventory, including classification and evaluation, of the scientific knowledge of Colombian social reality. (ECM)

362. WORKING CLASS, ANOMIA, AND SOCIAL CHANGE (ARGENTINA)

(a) Margot Romano Yalour de Tobar and Maria Magdalena Chirico. (b) In process. (c) Instituto Di Tella, Center for Urban and Regional Studies, Buenos Aires, Argentina. (d) None.

Problem. Analyze factors affecting feelings of individual anomia, as well as attitudes and value judgements associated with this feeling.

Previous Research. Data was obtained from the broader research, Margot Romano de Tobar,

M. Magdalena Chirico, and Edith Soubie, Socialization of the Rural Migrant, published in Cuaderno No. 9 of the CEUR.

Method. Subjective anomia was measured through the Srole scale and the analyzed variables in connection with its appearance referred to the social conditions that define the position of the individual inside the social structures. (JH)

Social Disorganization

363. ORIGINS AND DEVELOPMENT OF BEHAVIOR PROBLEMS IN SCHOOLBOYS (GREAT BRITAIN)

(a) D. J. West, H. B. Gibson, and J. Finney. (b) A long-term study initiated in 1961. Completion expected in 1969. For information, contact D. J. West, Institute of Criminology, Cambridge University, 7 West Road, Cambridge, England. (c) Cambridge University, Institute of Criminology, and Great Britain Home Office. (d) None.

Problem. Investigate associations between personal and background characteristics of schoolboys at an early age and adjustment at adolescence. Special consideration will be given to the development of juvenile delinquency.

Method. A survey of 400 unselected schoolboys aged eight to nine attending state schools within a one-mile radius of an office located in a working-class neighborhood in a large city is being conducted. Use is being made of cognitive and personality tests, teachers' reports of scholastic attendance and classroom behavior, comparisons with home backgrounds ascertained from interviews by psychiatric social workers, physical measurement of the boys, and data from social and medical records and agencies. There will be a follow-up of boys and families to adolescence, including collection of delinquency records. (SIE)

III. THE URBAN AND REGIONAL ECONOMY

Economic Theory

364. STRUCTURAL-ECONOMIC REGIONAL ANALYSIS AND REGIONAL PLANNING (SWEDEN)

(a) Folke Kristensson. (b) Completed. Findings published in Swedish, June, 1967. English edition scheduled for winter of 1967-68. (c) Stockholm School of Economics, The Economic Research Institute, with support from the City of Stockholm. (d) None.

Problem. Evaluate the demand of people and firms (including public organizations) for different types of regions, primarily with regard to size and density. The project employs a total model for the economic structure of a region, taking into consideration various aspects of propensities and productivity. The welfare of people and the efficiency of firms is measured. The results of the total model have, in part, been transferred into a fundamental physical structural model.

Method. The study centers on the Greater Stockholm region at large. So far, only a few comparisons have been made with other large metropolitan areas in Sweden and abroad. It is intended to extend the project and make analytical comparisons with large agglomerations abroad which have approximately the same problems as the three largest Swedish agglomerations, the Greater Stockholm-Lake Malar region, in particular. (RC)

365. INTRA- AND INTERORGANIZATIONAL INFORMATION FLOWS (SWEDEN)

(a) Bertil Thorngren. (b) In process. Preliminary report of the empirical results scheduled for spring of 1968. (c) Stockholm School of Economics, The Economic Research Institute. (d) None.

Problem. Subject hypotheses derived from an earlier study of regional external economies to empirical testing. Multi-dimensional classifications of organizational units and their interactions are thought to give insights into a large group of phenomena of relevance for economic development and planning.

Method. A large sample of organizational units of different scale, with different functions and in different locations, will be studied in order to trace the intrinsic network of information between these and surrounding units. The flows will be described with reference to senders and receivers, transmission forms, and other characteristics. Certain aspects of purpose and effect will also be observed. The methods for Latent Profile Analysis, used in an earlier study, will be refined and used for processing and analyzing data. The implications of implementing the new technology for retrieval and transmission of information on the clustering tendencies of economic activity will be of special interest. (RC)

366. ECONOMIC GROWTH OF METROPOLITAN AREAS (SWEDEN)

- (a) Ake E. Andersson and Rune Jungen.
 (b) In process. Publication scheduled for winter of 1967-68. (c) University of Goteborg, Department of Political Economy, with support from the Swedish government, the Tri-Centennial Fund of the Bank of Sweden, and the Swedish Council for Social Research. (d) None.

Problem. Construct a model for planned economic growth in a metropolitan area.

Hypotheses. For many years, labor has been a scarce factor of production in Sweden. The shift of labor from less to more productive economic sectors and regions has, therefore, been a central question in the discussion of economic growth. Since the shortage of housing in metropolitan regions has been a constraint on labor-mobility, a model for metropolitan growth must include publicly controlled distribution of housing construction as a control variable.

Method. A recursive growth model of quasi-input-output type has been constructed. The model includes elements of population analysis and concentrates on the allocation of labor force to different industries and on the inducement of local government service. The model has been applied to the economic growth of the Goteborg area.

Findings. The results indicate that a certain imbalance is a prerequisite for economic expansion in a metropolitan area of this kind. (AA, RJ)

Economic Development

367. BACKWARD AREAS IN INDUSTRIALIZED COUNTRIES

- (a) S. Groenmann (Utrecht University, Netherlands) and P. Turcan (Bratislava, Economic Institute of Slovanian Academy of Science, Czechoslovakia); with the following participants: D. Bradistilov (Economic Institute of Bulgarian Academy of Science, Sofia, Bulgaria); E. Bylund (Umea University, Sweden); L. E. David (Lieg University, Belgium); G. Gather (Gesellschaft fur Regionale Strukturentwicklung e. V., Frankfurt, Federal Republic of Germany); M. MacLennan (University of Glasgow, Glasgow, Scotland); J. Valarche (University of Fribourg, Switzerland); K. Mihajlovic (Economic Institute of the Federal Republic of Serbia, Belgrade, Yugoslavia); J. Mokre (University of Graz, Austria); M. Penouil (University of Bordea, France); P. Popov (Sofia, Bulgarian Academy of Science, Bulgaria); D. J. Robertson (University of Glasgow, Great Britain); F. Vito (Catholic University of Milan, Italy); and B. Winiarski (Wroclaw, High Economic School, Poland). (b) Part I completed in 1966. Twelve national reports for each country of the participating institutes and three general reports synthesizing the results to be available in early 1968 from the Institute of Sociology Solvay, Free University of Brussels, 44 Avenue Jeanne, Bruxelles 5, Belgium. Price not yet determined. Part II in process. National reports and summary publication to be available by end of 1968 from same address. (c) European Coordination Centre for Research and Documentation in Social Sciences, 3, Franz Josefs-Kai 3, Vienna 1, Austria. (d) None.

Problem. Part I--Examine: (1) typology of backward areas; (2) ideas and concepts concerning regional development; and (3) concrete policy pursued in the field of development of the aforesaid areas. Part II--Examine: (1) socioeconomic characteristics and evolution of areas chosen in each of the participating countries; (2) relations between the plan or the regional policy and the plan or the national economic policy; (3) sectorial policy and regional policy (comprising comparative study of a pole of development in each country); (4) relations

between regional problems and supranational integration. (RP)

140 pp. (c) Oesterreichisches Institut fuer Raumplanung. POB 562, A - 1011, Vienna, Austria. (d) None.

368. REGIONAL DEVELOPMENT, INVENTORY AND PROSPECTS

(a) A. Kuklinski. (b) In process.
(c) United Nations Research Institute for Social Development. (d) None.

Problem. A series of regional studies, to be prepared in cooperation with the United Nations regional economic commissions and the United Nations regional planning institutes, each covering the following items for the given region: (1) inventory, typology, and analysis of experiences and prospects of regional development activities; (2) proposals and recommendations for priorities in research and for contents of training arising out of (1). The study is designed to serve the interests not only of UNRISD but also of the regional commissions and institutes. It will provide a link between the activity of the Institute and the activity of the national centres to be established in the future. (GL-L)

369. GROWTH CENTRES AS INSTRUMENTS OF REGIONAL DEVELOPMENT AND MODERNIZATION

(a) A. Kuklinski. (b) In process.
(c) United Nations Research Institute for Social Development. (d) None.

Problem. (1) Define and analyze growth centres and related concepts, typology and interrelation of types; (2) develop hypotheses on the role of poles and centres of growth as instruments in a strategy for economic and social development and modernization, problems of policy implementation; (3) conduct case studies of actual experiences with growth centres; (4) draw conclusions and make recommendations. (GL-L)

370. AUSTRIAN FUNICULAR RAILWAYS AND THEIR ECONOMIC EFFECTS

(a) Felix Julg, with support from Diether Bernt. (b) Completed. Findings published in 1966 under the title Die Seilbahnen Oesterreichs. Available in German from the investigating agency.

Problem. Determine the effect on the local economy of an expanded funicular railway system; supply basic data for regional tourism planning.

Method. Methods include field studies, interviews within the communities, analysis of statistics, and investigation of profitability.

Findings. There is an important connection between function, technical system, and regional economic impact of a funicular railway. Special attention should be devoted to the hinterland of a funicular project, as explained in the report. The main economic effect which could be produced by funicular railways, is the development of a winter tourist trade. Nearly all branches of local economy could profit. (FJ)

371. AUSTRALIA'S NORTHWEST

(a) Alex Kerr. (b) Completed and published by University of Western Australia Press, Nedlands, Western Australia, 1967. \$8.00 plus postage.
(c) University of Western Australia, Department of Economics. (d) None.

Problem. To define and discuss policy issues implied in plans for further growth and increased investment in this region.

Previous Relevant Research. By the same author, Northwestern Australia, based on work carried out between 1955 and 1961, and published in 1962.

Findings. Dr. Kerr's earlier study raised questions as to how Northwestern Australia should be developed--if at all. By 1960 the industries of the area were showing signs of rapid growth and change, and the pace of the region's economic development has since accelerated considerably, and its character has changed even further. In this work, the author has updated his information and expanded the scope of his discussions. Among the subjects covered are population, employment and living conditions, the pastoral industries, mining, fishing, agriculture, water conservation, secondary and tertiary industries, and transport. Controversial subjects such as the Ord River scheme and

the massive mineral developments are also discussed. (SK)

the Ekonomski institut. (RTR)

372. URBAN AND REGIONAL INFRASTRUCTURE STUDIES (YUGOSLAVIA)

(a) E. Smolensky, T. Klemencic, and M. Gosar. (b) In process. (c) The American-Yugoslav Project, initiated by the Urbanisticni institut of Slovenia and Cornell University, under sponsorship of Ford Foundation, U. S. Department of State, Yugoslav Federal Council for the Coordination of Scientific Research. For information, contact Zora Debenak, Urbanisticni institut, Titova 98/II, pp. 346, Ljubljana, Yugoslavia. (d) None.

Problem. One phase of the project is a study of the optimum rate of housing construction for Ljubljana, a relatively rapidly growing city where the government has a dominant role in the investment decision. Another study will be concerned with efficiency criteria for investment in infrastructure. (RTR)

373. ECONOMIC MODELS OF SLOVENIA

(a) M. Dolenc, V. Frankovic, M. Pfajfar, M. Nikolic, M. Rockwell, and A. Rogers. (b) In process. (c) The American-Yugoslav Project, initiated by the Urbanisticni institut of Slovenia and Cornell University, under sponsorship of Ford Foundation, U. S. Department of State, Yugoslav Federal Council for the Coordination of Scientific Research. For information, contact Zora Debenak, Urbanisticni institut, Titova 98/II, pp. 346, Ljubljana, Yugoslavia. (d) None.

Problem. Development of a macroeconomic model which will entail the preparation of a number of estimates and parameters as well as partial analysis of different phenomena such as consumption functions, distribution of income, and production relations. The development of a spatial allocation model of economic activities in Slovenia is also planned.

Previous Research. A number of economic time series have already been compiled by

Agriculture

374. INDICATIVE WORLD PLAN FOR AGRICULTURAL DEVELOPMENT

(a) Staff project. (b) A continuing project, initiated in 1965 in response to a request made by the World Food Congress held in Washington in 1963. A first version will be placed before the Second World Food Congress in 1968 for discussion, and before the Fourteenth FAO Conference in 1969 for official consideration. Documents relating to the project include the following: Indicative World Plan for Agricultural Development. Note by the Director-General. C 65/17 October 14, 1965. (Item No. 7 of the Provisional Agenda of the 13th FAO Conference.) Report of the 13th Session of the FAO Conference. November, 1965. (Paragraphs 91-104.) Indicative World Plan for Agricultural Development, 1965-1975-1985. April 15, 1966, 8 pp. (An informational brochure.) Indicative World Plan for Agricultural Development. Progress Report. CL 47/26, September 30, 1966, 12 pp. (Item No. 4 of the Provisional Agenda of the 47th Session of the FAO Council.) Indicative World Plan for Agricultural Development, 1965-1985: Near East. Subregional Study No. 1, Volume I Text, 1966, 177 pp. (Provisional. A working paper prepared for the Third Session of the Near East Commission on Agricultural Planning, Cairo, November, 1966.) Inter-Agency Study of Multilateral Food Aid. Director-General's Progress Report to CCP. CCP 67/13, January 27, 1967, 39 pp. (Item V. 3 of the Provisional Agenda of the 41st Session of the Committee on Commodity Problems.) Agricultural Commodities--Projections for 1975 and 1985. CCP 67/3, Volume I, 339 pp. Volume II, 305 pp. \$3.00 or 15s each. (c) Food and Agriculture Organization of the United Nations, Rome, Italy, in cooperation with numerous international bodies, as well as national governments which are members of FAO. (d) None.

Problem. Elaboration of a global plan for agricultural development to cope with problems

of food shortage and hunger that face the world. Focus on proposed minimum and maximum targets for 1975 and 1985. Measure the approximate inputs in terms of capital investment, trained manpower and production requisites that will be needed to achieve these growth rates. Review the technical, economic, institutional and organizational policies that would enable these inputs to achieve maximum usefulness. Indicate policy choices, and most likely consequences of alternative choices. Purposes of the plan are: (1) to provide an international frame of reference to member countries in the planning of the agricultural sector of their economies; (2) to provide a framework within which both donor and recipient countries can see more clearly the priorities in respect of external aid to agriculture in developing countries; and (3) to assist FAO and other international organizations in the operation of their programs.

Method. The elaboration of the plan is being approached from two directions simultaneously: commodity by commodity on a world-wide scale to assess the prospects for international trade; and by geographical regions, to consider production possibilities in depth, within a framework of balanced economic growth. The results of each approach are expected to allow the progressive improvement of the other until they merge in the final stages of the plan. Although the implications of the plan are of major importance for high income countries, particularly as regards trade and aid, emphasis is being placed on ways and means of increasing production in developing countries. For these reasons, detailed sub-regional studies are undertaken for these countries by inter-disciplinary teams involving economists, nutritionists, production specialists, and experts on rural institutions, in order to define priorities for action in given areas, and to construct an integrated strategy of agricultural development.

Preliminary Findings. The food situation in developing countries is not improving. To some extent supplies are being kept up by imports of food, partly under concessional terms, partly at the expense of scarce foreign exchange which these countries need to help finance their economic development. But production of food has not even been keeping pace with population growth.

Furthermore, the study has so far shown that the need for food imports throughout

the world will increase rapidly. The major problems are where these imports will come from--developed or developing countries--and on what terms--commercial or concessional. Food aid from developed countries is one obvious solution. However, despite its advantage as a safety margin this solution presents serious dangers; it may well reduce the incentive to expand production both in receiving countries and in other developing countries with potential export capacity. Moreover this safety margin is not inexhaustible. Food aid should therefore only be considered as a temporary device for relieving hunger and malnutrition while the potential for increasing production in developing countries is progressively built up.

The only long-term solution to the food problem lies in the transformation of traditional agriculture. This will require a huge increase in purchased inputs, massive investments in agro-allied industries and infrastructure, and a major effort in the promotion of training and research. The plan should spell out the magnitude of these needs; the optimal balance through time between food aid and aid in the form of inputs and equipment; the balance between developed and developing countries as suppliers; and the institutions required to increase trade between developing countries.

An interesting sidelight of the project is the view of FAO's Director General that "the new sense of purpose given those manifold activities (of FAO), in answering the inter-related problems which the Indicative Plan will raise, will heighten their effectiveness." (SK)

375. SOCIAL AND ECONOMIC FACTORS IN AGRICULTURAL DEVELOPMENT

- (a) Part I, Ram Dayal; Part II, Ram Dayal and Charles Elliott. (b) Completed and published under the above title as Report No. 5. Subtitles of the two studies included are: "I The Impact of Selected Economic and Social Factors on Agricultural Output"; and "II Land Concentration, Land Tenure and Agricultural Output. A Summary." Available in English and French. (c) United Nations Research Institute for Social Development. (d) None.

Problem. The project covers two studies. One attempts to assay the contribution which social factors make to the growth of agricultural production. At least in developing countries, the effect of social factors is reflected more clearly in the agricultural sector than in the overall economy, where technological factors and foreign know-how would be expected to play a more important role.

Another study of the project dealt with two structural variables which have both social and economic aspects: land concentration and land tenure, to determine the influence of these variables on agricultural output.

Method. In the first study, the relationships between the different economic and social "inputs" and agricultural "output" have been expressed in the form of an aggregate production function, using data from 25 countries (16 developed and 9 developing). Even for this limited number of countries, however, too few data were available to include (apart from five economic indicators) more than two social variables: the turn-out of agricultural graduates and the per caput calorie consumption. An attempt has been made to measure the contribution of these two variables to the increase of agricultural output.

Findings. The study dealing with land concentration indicates that, contrary to a widely held view, in many cases small holdings, particularly in the developing countries, are yielding better results per hectare than large holdings. The study of land tenure provides no firm evidence of an axiomatic superiority of owner-farming over tenant-farming. The relative efficiency of each of the different systems of ownership and tenancy depends on the details of each system and the national context within which it has to function. (GL-L)

376. LAND REFORM

- (a) Not reported. (b) In process.
(c) United Nations Research Institute for Social Development. (d) None.

Problem. A study of cooperatives and other land reform implementation measures in various countries; it is hoped also to undertake one or more field investigations. In most countries, land reform projects are being implemented through state-sponsored

cooperatives. These are intended to fulfill the management functions usually supplied by landowners, as well as to provide their members with techniques and resources conducive to greater output and higher levels of living. For that reason, the creation of such cooperatives should certainly be considered an important method to achieve social change. (GL-L)

377. DIFFUSION OF INNOVATIONS IN AGRICULTURE

- (a) B. Galeski (Institute of Philosophy and Sociology of the Polish Academy of Sciences, Poland) and H. Mendras (Centre d'Etudes Sociologiques du C.N.R.S., France), with the following participants: Y. Arutjunian (Academy of Sciences of USSR); J. Castro Caldas (Centro de Estudos de Economia Agraria, Fundacao Calouste Gulbenkian, Lisbon, Portugal); M. Cernea (Institute of Philosophy of the Rumanian Academy of Sciences, Rumania), A. Hegedus (Sociological Research Group of the Hungarian Academy of Sciences, Hungary); G. E. Jones (Agricultural Centre of the University of Reading, Great Britain), G. A. Marselli (Rural Sociology Section, Agricultural University of Portici, Italy); Z. Ochavkov (Institute of Sociology of the Bulgarian Academy of Sciences, Bulgaria); J. Tauber (Faculty of Agricultural Economics, University of Agriculture in Prague, Czechoslovakia). (b) A comparative analysis of the results of different national investigations expected to be completed during the first half of 1968. Final publication will follow. (c) European Coordination Centre for Research and Documentation in Social Sciences, 3, Franz Josefs Kai, Vienna 1, Austria. (d) None.

Problem. Determine what effect the general socioeconomic system of an area has upon the pattern and rate of adoption of technical innovations by agricultural producers.

Method. In each of the participating countries, investigations are being conducted in two rural villages, one backward and one agriculturally developed. A basic questionnaire is being used, with the respective countries modifying it as necessary to suit their circumstances. (RP)

378. MODEL OF INVESTMENT BEHAVIOR OF FAMILIES IN THE PAMPA REGION (ARGENTINA)

(a) Guillermo Flichman, Alejandro Rofman, Julio Testa, and Carlos Tobar. (b) In process. (c) Center for Urban and Regional Studies, Buenos Aires, Argentina. For information, contact Centro de Estudios Urbanos y Regionales, asociado al Instituto Torcuato di Tella, Virrey del Pino 3257, Buenos Aires. (d) None.

Problem. A study of the behavior of agricultural entrepreneurs, to understand the reasons for incomplete use of land, mainly in the larger-sized holdings. The basic hypothesis is that there may exist a rational behavior of the farmer compatible with low productivity of the land. (JH)

Manufacturing

379. PRELIMINARY EVALUATION OF THE INDUSTRIAL SECTOR OF THE VALLEY OF THE CAUCA (COLOMBIA)

(a) Nodier Sabogal. (b) Publication was expected in April, 1967. (c) Corporacion Autonoma Regional del Cauca, Cali, Colombia. (d) None.

Problem. The study is a part of a more general study about the economic conditions of the industrial sector of the Cauca Region that includes facts about its economy in general, problems, trends, and policy suggestions. (ECM)

IV. SOCIAL SERVICES

Social Planning

380. THE ADOPTION OF SOCIAL CHANGE

(a) Herbert H. Hyman, Gene N. Levine, and Charles R. Wright. (b) Second study in process. Preliminary report of first study published as Report No. 2: Methods to Induce Change at the Local Level. A Survey of Expert Opinion. First Report. Available in English and French. Full report to be published in 1967 in book form

under the title, Inducing Change in Developing Communities. A Survey of Expert Advice, by the United Nations. Available in English, French, and Spanish through commercial channels. (c) United Nations Research Institute for Social Development. (d) None.

Problem. The first project of the study was a survey of experts' experience, mainly in the fields of community development, agricultural extension, health, and adult education, in inducing local peoples to adopt new habits and practices.

A second survey has now been initiated. This is a systematic study of the local peoples' own reactions to the introduction in their communities of innovations in the spheres of health and agriculture. This new survey is being carried out in three developing nations. In the first survey, the Institute had only been able to secure reports and observations from development experts; in the second, one of the purposes will be the verification of earlier findings through interviews with samples of recipients of innovations.

Method. Nearly 450 non-national and national informants were questioned in the first survey, either by mail questionnaire or through personal interviews. This sample of informants had had extensive experience in development work at the local level. It was drawn from lists provided by selected specialized international organizations, some bilateral programmes, and, in some instances, national governments and private organizations. (GL-L)

381. SOCIAL PLANNING

(a) Jan Drewnowski and Wolf Scott. (b) In process. Publications to date are: Jan Drewnowski, Report No. 3: Social and Economic Factors in Development. Introductory Considerations on Their Meaning, Measurement, and Interdependence, 1966. Available in English and French. Jan Drewnowski (Part I and II) and Wolf Scott (Part III), Report No. 4, The Level of Living Index. Available in English and French. (c) United Nations Research Institute for Social Development. (d) None.

Problem. The project first attempted to clarify some of the basic concepts and suggest a theoretical framework for the study of the interrelationships of social and economic factors, published in Report No. 3. While stressing the fundamental unity of economic and social development, the report identifies the "level of living" as the ultimate objective and therefore also the criterion of development. In order to develop this concept for operational purposes, the project tried to identify its main components, to suggest indicators for those components, and to indicate possibilities for the elaboration of a composite index for those components. This might then be used for cross-country comparisons and for measuring development over time, as well as, later on, an instrument to calculate the probable effects of alternative development plans. As a first test of the applicability of these proposals, indices were computed for twenty countries and compared with per caput gross national product and per caput consumption. Both the elaboration of the index of the level of living and the computations are published in Report No. 4.

Other tests to determine the usefulness and reliability of the Index and to improve upon the present suggestions are now in process:

For a limited number of countries, for which time-series of data are available, computations of the level of living at successive points of time will be made. This will be done both by staff members at the Institute itself and by national institutes in some of the countries concerned.

An attempt will be made to analyze the costs incurred by national economies in raising the levels of living through time. It is hoped that this analysis will help explain the difference in costs of raising the level of living between: (a) different stages of development, (b) different countries, (c) different components of the level of living, and thus throw some light on the interrelation of economic and social factors at different stages of development.

One of the most difficult problems in the elaboration of the Index of the level of living was the weighting of the various components. In Report No. 4, two alternatives have been suggested, both of a theoretical character. However, the project is now engaged in an attempt to discover the weights which development planners are actually attaching to different social programmes.

For this purpose a study is being made of all the available development plans, budget estimates, and other relevant material relating to social programmes and policies in the developing countries. Many of these plans, as has already become clear, are not precise enough to permit any deductions about planners' preferences. It is hoped, however, that the limited number of plans with more precise indications of social targets will yield some insight into the system of priorities in development policies and the place of social targets in development plans. (GL-L)

382. COST-BENEFIT ANALYSIS OF SOCIAL PROJECTS

(a) Not reported. (b) Completed and published under the above title as Report No. 6. Available in English and French. (c) United Nations Research Institute for Social Development. (d) None.

Problem. In September of 1965, a small group of experts was convened to give special attention to the problems of cost-benefit analysis of social projects. The meeting provided the Institute with the opportunity to discuss a. o. the use of the level of living index for the measurement of the benefits of social projects. It also afforded an occasion to discuss some practical experiences in this field and thus to see more clearly how much still remains to be done before cost-benefit analyses of social projects may really be carried out in such a comprehensive manner as to become a reliable tool in the planning process. (GL-L)

383. PLANNING FOR CHILDREN

(a) Not reported. (b) In process. Report expected in the near future. (c) United Nations Research Institute for Social Development. (d) None.

Problem. Indicate how national planning could take more account of the needs of children and youth in the development process, from the point of view both of the present needs of children and youth and of the future needs of society. The study was undertaken at the request of UNICEF. (GL-L)

384. COMMUNITY FACILITIES AND PUBLIC SERVICES IN URBAN AREAS

(a) Oscar Yujnovsky, Margot Romano de Tobar, Oscar Fisch, Raul Basaldua, Florencio Ballesteros, Ruben Gazzolli, and others. (b) In process. (c) Center for Urban and Regional Studies, Buenos Aires, Argentina. For information, contact Centro de Estudios Urbanos y Regionales, asociado al Instituto Torcuato Di Tella, Virrey del Pino 3257, Buenos Aires. (d) None.

Problem. A series of research projects proposed in five centers which act as poles in the Argentine regional structure (except the Buenos Aires metropolitan area), another five of intermediate size (approximately 50,000 inhabitants), and finally, another five of lesser size (less than 20,000 inhabitants) including some between 2,000 and 5,000 inhabitants. Proposed research includes: (1) Regional outlines--global analysis to situate the selected centers, considering hinterland, relationship with other centers, general situation of the area, general trends of the economy and possibilities of development. (2) Urban outline--delineate present situation as to existing shortages in public services and community facilities and projections, taking into consideration expected population growth, demand, and local characteristics. (3) Outline of areas of low income strata--evaluate the condition of low income strata; determine what sectors definitely require federal aid, what type of aid (education, organization, economic-administrative, etc.), and to what degree. Survey initiatives and projects of community facilities for marginal sectors. Preparation of a typology of these according to relative urgency, advisable ways of execution, type of data and necessary elaboration to complement the projects, and other aspects which will allow the organization of an action program. Evaluate a project in which community action played an important role, to identify the incidence of this action on the project. (4) Working scheme--formulate general criteria for urban overhead and public services so as to constitute a general framework in which future action of the Department may be inserted in its specific and located projects; formulate a plan of public services and community facilities, for indigent sectors of the population, taking into consideration the general criteria, available resources, and

the ability of the strata to which this plan is oriented, to contribute to its successful realization. (JH)

385. URBAN COMMUNITY ORGANIZATION (INDIA)

(a) Tressie J. Aranha, Laila Lakdawall, and Jyotsna Shah. (b) In process. (c) Institute of Social Service, School of Social Work, Bombay, India, under sponsorship of U. S. Department of Health, Education, and Welfare, Welfare Administration, Office of the Commissioner, Division of International Activities. (d) None.

Problem. To develop a method for organizing urban welfare services: (1) assess social change in the community as a result of the implementation of the community organization process by a community organizer; (2) identify the techniques used by the organizer in the development of the welfare programs; (3) demonstrate how the community organization process helps a heterogeneous, urban community plan and develop its own welfare services.

Hypothesis. A heterogeneous urban community will develop increased "neighborliness" when exposed to a welfare program introduced through the community organization method, consequently leading to increased capacity of the community for participation in social action.

Method. A typical low income neighborhood in Bombay City with a population of about 1,000 families has been selected for study. Three sample surveys are to be conducted at three points in time, the beginning, middle, and end, to gauge the social change that comes about in the community, particularly with respect to "neighborliness" and "participation" because of community organization. Measures of neighborliness and participation have been developed. There will also be developed measures to identify, document, and evaluate the process of community organization. (TJA)

386. ANALYSIS AND RECOMMENDATIONS FOR AN URBAN DEVELOPMENT PROGRAM IN SECTOR MANUEL RODRIGUEZ, SANTIAGO (CHILE)

(a) Gustavo Munizaga, Lucy Berwart, Arturo Aylwin, Pablo Baraona, Beatriz Arbildua, Hernan Ayarza, Margarita Onat,

Joan MacDonald, Ana Maria Viveros, Barclay Hudson, and Sergio Bravo. (b) Completed. Preliminary edition of five volumes scheduled for limited distribution by November, 1967. Vol. I, Introduction and General Aspects; II, Social and Demographic Diagnosis; III, Education in an Urban Development Process; III, Economic Aspects; IV, Legal and Administrative Aspects; and V, Physical Recognition and Diagnosis. Final edition to be published in 1968. For information contact Gustavo Munizaga, Team Director, Programa de Asistencia Technica, Comité Interdisciplinario de Desarrollo Urbano, Casilla 16002, Santiago, Chile. (c) Universidad Catolica de Chile, Comité Interdisciplinario de Desarrollo Urbano, under sponsorship of Ford Foundation. (d) None.

Problem. An interdisciplinary project to provide a general background for diagnosis and definition of main problems in a marginal sector of Metropolitan Santiago, Sector Manuel Rodriguez, and recommend policies and programs for action in the problem areas. This area of approximately 100,000 inhabitants and 790 acres, southwest of Santiago, originated as a result of a program developed by the Housing Corporation as an emergency settlement solution. Living conditions in the area are restricted and needs in housing, community development, political participation, social change, improvements in work and income, public utilities, and facilities exist.

Method. Each team developed methods needed for its specific purposes. Interdisciplinary relations developed mainly through discussion and collaboration in a field survey, including questions covering major aspects in the social, economic, and physical fields. The community participated actively in the survey, special task topics, and discussions, especially through a representative who was a permanent member of the team.

Findings. The concept of marginality was not found greatly applicable to this area. Problems of slum or "camp" areas in the cities undergoing explosive urbanization with insufficient economic growth and social change can only be analyzed comprehensively. Community participation, usually assumed to exist, was, in this case, perhaps, the main problem. The segregation of underprivileged sectors of city population through public policy generates wider and deeper

accumulation of problems and future areas of violence, pressure, and waste of scarce resources, within the process of urban development. (GM)

387. COMMUNITY PLANNING FOR A BLIND COMMUNITY (SWEDEN)

(a) Lennart Person, Anders Arnor, and Harry Persson. (b) Completed and report issued April, 1967. In Swedish. (c) Swedish Central Committee for Rehabilitation, Working Group for Transportation and Planning, with cooperation from Foundation for the Housing for the Blind, Public Utilities Companies, The Society for the Blind (DBF). (d) None.

Problem. A demonstration project conducted in a small, restricted area of Stockholm, in order to study planning to improve conditions in a blind community.

Method. In the summer of 1965, fifteen people were interviewed about housing, occupation, routes they walked, and their suggestions for improvement in planning for the blind. The ways the blind walked were mapped; barriers to safe and easy walking described; improvements discussed and recommended.

Findings. The report gives detailed suggestions for improved conditions for the blind. These include the following: Stores and houses should have their street numbers on doorknobs in braille; there should be as few flights of stairs as possible, hollow boot scraper at foot of stairs for scraping off snow to reduce danger of slipping; and curved handrails to avoid injury when running into them. Have all street signs in one place by coordinating them with traffic islands; have larger street signs and have them lower with names in raised lettering so names can be read with fingers. Standardized, clear markings for barriers around street repairs; announcement of such construction obstacles in advance. Special walks across driveways should be designated. All street signals should have some audio designation. Poles on the sidewalk, such as light poles, should be equally spaced. Streets should be arranged in a clear pattern. Relief maps, of their own area, especially, should be made available to the blind. (HM)

Housing

388. SIMULATION MODEL FOR A HOUSING MARKET (ARGENTINA)

- (a) Oscar Fisch. (b) In process.
(c) Center for Urban and Regional Studies, Buenos Aires, Argentina.
(d) None.

Problem. This model under study intends to simulate the mechanism of an urban housing market, to determine inner and outer variables in stock formation and establish ranks and intervals of the used parameters. The work is integrated with the planning and control requirements of urban accounting. (JH)

389. HOUSING IN ITALY, 1881-1961

- (a) Luigi Biggeri. (b) Completed and published under the title "Le Abitazioni In Italia Al Censimenti Dal 1881 Al 1961," Ricerca Sul Problema Delle Abitazioni In Italia Documentazione N. 6, Aprile, 1967, 67 pp. (c) Istituto Di Statistica Dell'Universita Degli Studi, Via Curtatone, 1, Firenze, Italy. (d) None.

Problem. A recapitulation of fundamental data concerning the development and use of the housing inventory in order to supply background information for a study of housing conditions in the country. The report covers occupied and vacant dwellings, rooms in occupied dwellings, occupants, and families. Data are presented for the following districts: provinces (single provinces and wider districts); the whole of communes with more than 100,000 inhabitants in 1961 (data for single region and wider districts); communes which are chief towns of provinces; and communes with more than 50,000 inhabitants in 1961. The reconstruction of comparable series has been made with reference to the political and administrative boundaries at the latest population census. In order to give an indicator of the housing situation, two ratios have been worked out--rooms per dwelling and occupants per room. (LB)

390. THE STATISTICS OF VACANT HOUSING (ITALY)

- (a) Luigi Biggeri. (b) Completed. Findings presented at the XXV Riunione Scientifica della Societa Italiana di Statistica, May, 1967, and subsequently published under the title "Le Abitazioni Non Occupate E La Loro Rivelazione Statistica," Ricerca Sul Problema Delle Abitazioni In Italia, Documentazione N. 7, Maggio, 1967. In Italian, only. (c) Istituto di Statistica Dell'Universita Degli Studi, Via Curtatone, 1, Firenze, Italy. (d) None.

Problem. Survey and analyze the statistics of vacant housing in Italy.

Findings. Housing vacancies can be divided into two categories, those on the market (sound and available for sale or rent) and those off the market (unavailable or unfit). Statistics on vacancies, to be of help in housing policy decisions, must give some information on the above categories. The data, according to their utilization, can be obtained following different methods: (1) housing census and intercensus national sampling surveys for determining housing needs; (2) surveys limited to the most important cities to obtain an indicator of the housing market situation.

In Italy, it was impossible to obtain actual data on vacancies on the market. The investigator considers it necessary to: (1) deepen future censuses and modify some denominations and definitions used in the past; (2) undertake a national sampling survey to get valid data on vacancies at the present moment, and repeat the survey periodically; (3) study the possibility through local statistical offices, of researching the housing market situation in the most important cities at least every six months. The report has two appendices, statistics on vacancies in other countries, and the results of a control survey on data collected on occasion of the X⁰ demographic Italian census. (LB)

Health

391. EVALUATION OF CROSS-CULTURAL DEFINITIONS FOR EPIDEMIOLOGICAL STUDIES IN MENTAL HEALTH (CHILE)

(a) J. Horwitz and J. Marconi. (b) In process. (c) University of Chile, Psychiatric Hospital (Santiago), under sponsorship of U. S. Army. (d) None.

Problem. To perform an epidemiological survey of mental health problems in Chile to determine significant factors generating and affecting them.

Method. Conduct an epidemiological survey among urban, rural, and Indian reservation groups in home environment and when translated to other environments. Areas to be studied include alcoholism, dementia oligophrenia, oligophrenia, epilepsy, psychosis, and neurosis. An analysis will be made of relationships to cultural habits and cross-cultural factors. (SIE)

392. ALCOHOLISM IN AN INDUSTRIALIZED CENTER

(a) Celina Sikorska-Godwod. (b) In process. (c) State Sanatorium for Mental Diseases, Psychiatric Unit (Warsaw), in cooperation with The Ministry of Health and Welfare of Poland, under sponsorship of U. S. Department of Health, Education, and Welfare, Office of the Commissioner, Division of International Activities. (d) None.

Problem. Investigate the problems of alcoholism in rapidly industrialized areas to determine the basis for the increase in alcoholism during quick industrialization, the groups of people most susceptible to alcoholism, the relationship between the problem and the degree of development of cultural and welfare services, and the extent to which gradual stabilization of the economy affects the problem. The work is concerned with the alcoholism problem in the settled and immigrating population in the area of the town and county of Plock, Poland. Until 1960, Plock was a quiet, nonindustrial town. Then the Polish Government located its biggest center for the petrochemical industry there.

Method. Collect personal data of a representative sample in the settled and immigrating population; assemble information pertaining to alcoholism based on information in community agencies; analyze data; interview alcoholics and their families (all volunteers); compare findings with those of similar studies being conducted in a small town with a stable economy. (CS-G)

393. PSYCHOPHYSIOLOGIC REACTIONS AND PSYCHOSOMATIC ILLNESS OF A RURAL POPULATION (TAIWAN)

(a) T. Lin and H. Rin. (b) In process. Findings reported by the investigators in "Psychophysiological Reactions of a Rural and Suburban Population in Taiwan," *ACTA Psychiatrica Scandinavica*. (c) National Taiwan University, Taipei, Taiwan, under sponsorship of U. S. Army. (d) None.

Problem. Study the epidemiological aspect of psychophysiological reactions in a rural and suburban population in Taiwan to determine the prevalence of psychophysiological reactions and symptoms in a sample population, and its occurrence in relation to socioenvironmental factors and socio-dynamic factors.

Method. An age-stratified random sample of 488 from 3,748 inhabitants over age 15, from two villages in the district of Musan were studied. The sample consisted of four subgroups of equal size with respect to sex, ethnic origin, native Formosan, and Mainland Chinese. Household visits for each sample individual were made by the investigators from December, 1963, to March, 1964. Cross-cultural studies are in progress. The investigators are also planning a longitudinal follow-up survey of 488 random samples in Musan to explore further the relationship between change of psychophysiological symptoms and social dynamics. (SIE)

V. LAND USE AND TRANSPORTATION

Urban Design

394. TIME BUDGETS AND URBAN DESIGN

(a) Torsten Hagerstrand. (b) In process. (c) University of Lund, Department of Human and Economic Geography,

LAND USE AND TRANSPORTATION

with support from the Tri-Centennial Fund of the Bank of Sweden. (d) None.

Problem. Develop a "physical organization model for an urban community," a model structured in terms of time and space. Construct the model by observing the activity lines of individuals and the connections between them; compare the outcome in terms of effectiveness and social welfare, of different forms of spatial organization (e.g., employment and residence).

Hypothesis. Considered over time, an individual may be said to perform a line of activities between stations, a line that displays a generally fixed rhythm, with diurnal, weekly, and seasonal pattern. The activity lines of a complete population will interweave in a highly complex manner. Yet, this network is integrated in such a way that a change in one segment involves adaptation to a varying extent in others. Both the individual's possible combinations (his time budget) and the structure of the entire system are functions of the density and differentiations of the stations, the availability of the lines of communication, the population in the district, institutional schedules (e.g. working hours, transport time tables), consumption habits, and the fact that each day contains a limited amount of time, part of which is spent on sleep and other physiologic requirements.

Method. (1) Review international literature and collect statistical data available on use of time in different contexts; (2) develop a conceptual system in order to uniformly and quantitatively describe the everyday activities in different physical and economic environments; (3) collect data from observation which may illustrate how time budget systems vary with city size. (IL)

395. TRAFFIC NOISE AND URBAN DESIGN

(a) Erland Jonsson and collaborators. (b) In process. Investigation of traffic noise to be completed and findings published in 1968. (c) The National Swedish Institute for Building Research and the National Swedish Institute of Public Health. (d) None.

Problem. To determine the best location, grouping, and building construction to avoid nuisance of traffic noise.

Hypothesis. The individual nuisance is related to the noise level.

Method. A stratified selection of areas along motorways and expressways are being studied from an environmental point of view by measurements of noise level and traffic flow, from the individuals' by interviews, and from town planning by a technical description of the development. (HF)

Land Use--General

396. GREATER STOCKHOLM PROJECT

(a) Staffan Helmfrid, Dagny Torbrand, and Torvald Gerger. (b) In process. Publications scheduled for 1968-69. (c) University of Stockholm, Department of Human Geography, with support from the Tri-Centennial Fund of the Bank of Sweden. (d) None.

Problem. To investigate the internal structure of Greater Stockholm by studying different measures of interaction and land use.

Method. The investigation is based mainly on primary material collected through interviews. (DH)

397. SWEDISH URBAN SPATIAL STRUCTURE

(a) Carl-Gunnar Janson. (b) In process. Preliminary reports scheduled for 1968. Completion expected in early 1969 with final reports later in 1969. (c) The National Swedish Institute for Building Research. (d) None.

Problem. Develop basic descriptive dimensions of the spatial structure of large and medium-sized Swedish cities; analyze the spatial pattern of the cities in terms of these dimensions.

Method. Factor analysis of some 50 ecological variables in approximately ten cities. Factor scores will be computed and plotted on maps. (C-G J)

Land Use--Residential

398. COMPARATIVE STUDY OF ENVIRONMENTS

- (a) Arne S. Dolven. (b) In process.
(c) Norwegian Institute of Urban and
Regional Research. (d) None.

Problem. Determine: (1) how people live in different Norwegian environments; (2) whether it is possible to produce a measure for "livability"; (3) which qualities and problems influence the nature of different local communities; (4) whether it is desirable to group houses in neighborhoods, and if so, what the optimum size should be; (5) what aspects require better planning in the different local communities.

Method. In each of five different local communities, interview a random sample of 200 persons over 15 years of age; construct a time budget with special emphasis on localization of activities; gather comparative information about the physical structure. (TFR)

Transportation--Highways--Planning and Design

399. THE RING ROAD SYSTEM (JAPAN)

- (a) H. Ogawa, H. Igarashi, and T. Mitachi. (b) In process. Findings to date published in H. Ogawa and H. Igarashi, A Study of the Ring Road System, Hokkaido University, March, 1967. (c) Hokkaido University, Faculty of Engineering (Hokkaido), under sponsorship of the Government of Japan, Education Ministry. (d) None.

Problem. Analyze factors affecting traffic congestion in the central area of towns; determine whether the ring road system, especially for trips to and from a town's central area, is a suitable method for relieving this congestion. (SIE)

400. TRIP DISTRIBUTION IN SWEDISH TOWNS

- (a) Stig R. Nordqvist, Sten Bexelius, Georg Nimmerfjord, and Eric Read.
(b) Completed. Publication issued February, 1967. English version

scheduled for 1968. (c) Lund Institute of Technology, Department of Traffic Planning and Engineering, with support from National Swedish Council for Building Research. (d) None.

Problem. To investigate parameters and behavior of the gravity model for traffic movement.

Hypotheses. The gravity model ought to be interpreted as a probability model of competing opportunities. The probability that a trip, to or from an area in which the trip-maker has his main place of staying (generating area), will end in an attracting area j is written $Q_j \cdot f(d_{ij})/j (Q_j \cdot f(d_{ij}))$, where Q_j denotes the competing ability of attractiveness of an area and where $f(d_{ij})$ stands for a function of the distance between the areas.

Method of Study. Investigations in the qualities of the function of distance, and methods of determining the Q_j 's. Calculation of parameters for generativity, attractiveness and the distance function, using data from origin-destination surveys in Swedish towns.

Findings. It was found that parameters of generativity have systematic deviations of up to 60-70 percent (trips generated in "own place of work"). A method of determining the Q_j 's and the distance function is developed. The systematic deviation between observed and calculated traffic volumes between pairs of areas was found to be about 20-30 percent. Actual distance or distance in a "bee line" made little difference, nor did the dividing of trips into purposes. Truck trips showed greater deviations than car trips. The above findings were about the same in all towns. (JGL)

401. MODELS FOR COMMODITY MOVEMENTS OR TRUCK TRIPS IN URBAN REGIONS (SWEDEN)

- (a) Stig R. Nordqvist and Jan G. Lindhe.
(b) In process. (c) Lund Institute of Technology, Department of Traffic Planning and Engineering, with support from The National Swedish Council for Building Research. (d) None.

Problem. A preliminary study of the underlying principles of commodity movements or truck trips from which to form a base for future investigation to construct models.

Hypotheses. The structure of truck-trips is determined in a more "rational" way than that of private car trips; it is not sufficient to calculate truck-trips as a certain percent of car trips.

Method. Study pertinent literature and area traffic studies; interview business firms to determine underlying principles of commodity movements; analyze these principles to form a base for a proposal of further investigation concerning parameters. (JGL)

402. THE INDIVIDUAL'S CHOICE AMONG SERVICE SITES (SWEDEN)

(a) Orvar Westelius. (b) In process. Publication scheduled for spring of 1968. (c) NPI, The Swedish Economy Town Planning Research Institute. (d) None.

Problem. To analyze and describe multi-purpose trips in terms of the relation between individuals' basic travel patterns and their habitual choice among different outputs of service trades. The basic travel pattern includes journeys to work, visits to friends, relatives, and community facilities--destinations that have an unique location for the individual in the short run. According to these basic patterns people are inclined to do errands, shop, and make similar trips to many destinations widely spread over the urban area.

Hypothesis. There is a stochastic time-independence between peoples' basic travel pattern and their needs of different kinds of services supplied at sites scattered over the urban area.

Method. A 1/10 statistical sample of the adult population in a town of 80,000 inhabitants was conducted. Trip patterns during a single day were recorded--destinations, travel modes, and approximate time schedule. As data were analyzed and multi-purpose trips classified according to destinations, a composite pattern emerged which could be described in terms of regenerative stochastic processes. (OW)

403. LUND SCHOOL ROUTES

(a) Torsten Butler, Eva-Lis Nilsson, Stig Nordbeck, and Bengt Rystedt.

(b) In process. Findings published in working papers (Swedish) only.

(c) Lund Institute of Technology, Department of Building Function Analysis, with support from The National Swedish Council for Building Research. (d)

None.

Problem. Determine which factors are decisive in a person's choice of route in a given road-net, and compare it with the "best" one, "best" defined as the shortest or safest route.

Method. Every school child in Lund was asked to fill out a questionnaire and to draw his school route on a map (scale of 1: 10,000). The location of every child's home, every school, and every street corner (nod) is given by means of coordinates in the Swedish Land Use Map coordinate-system, enabling the material to be computerized. (BR)

VI. GOVERNMENT

Management

404. PUBLIC PARTICIPATION IN THE ADMINISTRATION OF LAW AND ORDER (GREAT BRITAIN)

(a) M. Banton. (b) In process. (c) University of Bristol, Department of Sociology, under sponsorship of Nuffield Foundation. (d) None.

Problem. Develop better ways of exploring the relationship between the police and the public and public participation in administering regulations.

Method. The interrelationships, application, and interpretation of particular regulations in specific contexts will be described with regard to different categories of persons living in one city, e.g., young people, professional drivers.

Findings. Findings to date reveal that particular attention should be paid to the contextual meaning, the processes of discretion, exemption and excuse, and to the reasonability of alternatives. (SIE)

Planning

405. ORGANIZATION OF PLANNING IN YUGOSLAVIA

(a) V. Music, M. Slajmer, I. Robinson, L. Wingo, M. Wolfe, J. Fisher, V. Kokole, S. Zuljic, T. Klemencic, R. Rajic, E. Pusic, Gosar, Vasle, Gaberscik, V. Frankovic, and R. Lembke. (b) In process. (c) The American-Yugoslav Project, initiated by the Urbanisticni institut of Slovenia and Cornell University, under sponsorship of Ford Foundation, U. S. Department of State, Yugoslav Federal Council for the Coordination of Scientific Research. For information, contact Zora Debenak, Urbanisticni institut, Titova 98/II, pp. 346, Ljubljana, Yugoslavia. (d) None.

Problem. The problem is being studied through several projects. One study is investigating alternative patterns of spatial organization of the Ljubljana metropolitan area.

Another study will compare the organization of urban and regional planning and its relationship to the decision making apparatus in Ljubljana and Zagreb. Emphasis is on the missing coordinating link in regional planning decision making on the intercommunal level.

The following preliminary studies for future research are being conducted: (1) traffic analysis of the Ljubljana region; (2) urban land use analysis of towns; (c) analysis of the network of retail centers in the Ljubljana region; and (4) the industrial location characteristics and the spatial structure of the Ljubljana metropolitan area. (RTR)

406. LONG-TERM PHYSICAL AND ECONOMIC PLANNING IN SMALL AND MEDIUM-SIZED CITIES (SWEDEN)

(a) Per Holm. (b) In process. Publication scheduled for spring of 1968. (c) Stockholm University, Department of Economics, with support from the National Swedish Council for Building Research. (d) None.

Problem. To develop a method for coordinating physical and economic long-term planning.

Hypotheses. (1) A physical development plan must be consistent with an "investment" plan for housing and community equipment. (2) A long-term community investment plan must be developed as part of a model for the total economic development of the region. The development is "geared" with a selected group of action parameters and certain goal variables.

Method. The base of the research is a detailed "case study" of development within different sectors of a medium-sized Swedish city during a ten-year period. Results were used to construct a model for a local, long-term, economic plan. The model is being tested on several communities. (PH)

407. THE TOWN PLANNING PROCESS IN SWEDEN

(a) Hans Fog and others. (b) Continuing project, started in 1962. Recent reports include Ett ars stadsplaner (One Year's Town Plans), 1966:37; and Hus och mark i 21 planexempel (Housing and Land in 21 Plan Examples) 1966:38. A report to be issued at the end of 1967 (1967:38) dealing with the time lag between initial preparation of a plan and its implementation through building construction. (d) National Swedish Institute for Building Research. (d) None.

Problem. Examination of connections and dependencies among various decision making bodies involved in the process of physical planning with a view to effecting improvements through systematic division of planning into stages.

Method. Chiefly systematic compilation of empirical material. Methods have been developed to employ numerical data to describe plans. (HF)

408. METHODOLOGY FOR PLANNING IN THE PROVINCE OF RIO NEGRO (ARGENTINA)

(a) Alejandro Rofman, Maria Magdalena Chirico, Guillermo Flichman, and others. (b) In process. (c) Center for Urban and Regional Studies, Buenos Aires, Argentina. (d) None.

Problem. Prepare a methodology to initiate a development plan for the Province of Rio

Negro. In the middle-range, this Province will possess large overhead facilities and basic industries (Chocon project, mining at Sierra Grande, Soda Solvay, etc.) which will substantially transform it. Therefore, it is necessary to anticipate the changes, in planning the impact of these projects. (JH)

409. URBAN AND SUBURBAN LAND POLICY AND MECHANISMS FOR ITS REGULATION IN SOUTH AMERICA

(a) Raul Basaldua, Jorge Hardoy, and Oscar Moreno. (b) Completed. (c) Center for Urban and Regional Studies, Buenos Aires, Argentina. (d) None.

Problem. This study, commissioned by the United Nations, included analysis of the urbanization process, past and present, in South America; planning and zoning policy; location and land division; legislation and taxes; methods and practices for acquisition and administration of fiscal land. The project concluded with a perspective whose main objective was to state possible solutions and enumerate patterns for organization and management of the institutional and normative machinery.

Method. The necessary information was gathered by visits to all South American countries. (JH)

410. SOCIAL WELFARE AND OVERHEAD FACILITIES IN BALCARCE

(a) Carlos Tobar, Edgardo Derbes, Mario Malajovich, Florencio Ballesteros and others. (b) In process. (c) Center for Urban and Regional Studies, Buenos Aires, Argentina. (d) None.

Problem. Research will be based on studies already undertaken in the Southeastern area of the Province, and will have the following goals: (1) Prepare an outline and a short-range investment plan for Balcarce; (2) prepare a city plan, including housing, overhead facilities, and industrial location; (3) study sources of finance and resources, including the possibility of tourism in the area. (JH)

411. INVENTORY OF THE PUBLIC, COMMERCIAL, AND AGRICULTURAL ASPECTS OF ANTIOQUIA TOWNSHIPS

(a) Rodrigo Hernandez Ortiz. (b) The study was initiated in November, 1966, and was supposed to last until April, 1967. (c) Institute for the Development of Antioquia. (d) None.

Problem. To gauge all the needs of the Antiochean townships in order to program for their better social, economic, and political organization. The main object is to create a general program that will establish priorities according to need. (ECM)

BRIEF MENTION

New Research Programs and Information Services

412. WORK PROGRAM IN URBAN AND REGIONAL RESEARCH, UNITED NATIONS ECONOMIC COMMISSION FOR EUROPE (GENEVA)

Two activities of ECE's Committee on Housing, Building, and Planning are of special interest to readers of the Digest. One is the compilation and publication of a directory of national organizations concerned with urban and regional research. The other is a conference of senior officials of these organizations, to be held in Stockholm in April, 1968. Both projects are under the general supervision of a body called, for want of a shorter title, Working Group for the Promotion of International Cooperation between National Bodies Concerned with Urban and Regional Research. Chairman of the group is Mr. Per Holm, director of Sweden's National Council for Building Research. Both activities, also, are regarded as logical steps in pursuing ECE's growing interest in the scope, character and trend of urban research, in methods and new techniques, and in the promotion of direct and systematic collaboration among the relevant national research bodies for their mutual benefit.

The Committee has been giving attention to this matter since it was first anticipated as a necessary and desirable field of investigation by the Sub-Committee (then Working Group) on Urban Renewal and Planning at its second session in Geneva in September, 1964. The feeling of some persons close to this activity, as expressed in personal conversation with the editor of the Digest, is that it may well become in time one of the most important functions in the Committee's total program.

For those who are not familiar with the Committee's overall program, a list of its publications from 1949 through 1967 can be obtained from the address given below. Many of these publications, particularly recent ones dealing with structure and productivity of the building industry; the supply, development and allocation of land for housing and related purposes; major long-term problems of government housing and related policies; regional physical planning; and on the future patterns and forms of urban settlements, are especially germane to the

Digest's area of interest. Inquiries should be addressed to Mr. Benjamin F. Reiner, Chief, Housing, Building, and Planning Section, Steel, Engineering and Housing Division, Economic Commission for Europe, Palais des Nations, Geneva, Switzerland. (SK)

413. UNITED NATIONS RESEARCH INSTITUTE FOR SOCIAL DEVELOPMENT (GENEVA)

The United Nations Research Institute for Social Development is an autonomous United Nations body which started its work in July, 1964, to "conduct research into problems and policies of social development and relationships between various types of social development and economic development during different phases of economic growth." It is hoped that the findings of the Institute will help the United Nations, the specialized agencies, and governments to relate action in various social fields to economic development and vice versa. It would thus also help the developing countries in their efforts at balanced overall development. The Institute has distinguished three major areas of research: (1) inter-relationships between economic and social factors in the development process; (2) methods of social planning as a means of influencing the development process; and (3) problems and methods involved in the adoption of social change.

The Institute was not set up with the expectation that it would be a permanent institute. For this reason, the Institute is not financed from the regular budget of the United Nations. Its creation was made possible by a gift of \$1 million from the Netherlands Government, in the context of the United Nations Development Decade. Although the Institute has its own governing body, budget, and staff and does not form part of the U. N. Secretariat, it is a member of the United Nations family, which enables it to keep in close touch with the developments within and with the staff of the U. N. agencies. The day-to-day work is carried out by a small interdisciplinary regular staff, occasionally assisted by short-term consultants. Close contact and cooperation is maintained throughout with the United Nations, the specialized agencies, the three United Nations Regional Development Institutes, all of which are represented on the Institute's supervisory Board.

BRIEF MENTION

Distinguished scholars and research workers in the field covered by the Institute may associate themselves with the Institute, participate in seminars and discussions, use its facilities, and, on occasion, present papers on subjects within the scope of the Institute's activities.

Board members include Jan Tinbergen, Director, Netherlands Economic Institute, Rotterdam, Chairman; Heikki Waris, Professor at the University of Helsinki, Finland, Vice-Chairman; Hamid Ammar, Professor at the Faculty of Education, University of Helipolis, Cairo; Mohamed Ennaceur, Head of the Department of Labour, Vocational Training and Employment, Ministry for Youth and Sports of the Government of Tunisia, Tunis; Phillip Hauser, Director, Population Research and Training Center, University of Chicago, Chicago; and Jerzy Wiszniewski, Professor at the Main School of Planning and Statistics, Warsaw. Other members are a Representative of the Secretary General (Miss Julia Henderson); the Director of the Institute for Economic and Social Planning, Santiago de Chile; the Director of the Asian Institute for Economic Development and Planning, Bangkok; the Director of the African Institute for Economic Development and Planning, Dakar; the Director of the Institute (ex-officio); and Representatives of two of the following specialized Agencies, appointed in rotation: the International Labour Organization, the Food and Agriculture Organization, the United Nations Educational, Scientific and Cultural Organization and the World Health Organization. (GL-L)

414. TERRITORIAL PLANNING--HOUSING--INFORMATION. INTERNATIONAL GROUP FOR CO-OPERATION AND RESEARCH ON DOCUMENTATION (PARIS)

Formation of an international group to carry out research related to the development of documentation services in the fields of regional and urban planning and housing was effected at a three-day meeting held in Paris in December, 1966. Sponsored by the French Ministry of Equipment, and organized by S.M.U.H. (Secretariat des Missions d'Urbanisme et d'Habitat), the meeting was attended by representatives of 12 international organizations and 30 other organizations in 19 countries.

In addition to working out the form of organization, the conferees recommended that their

efforts be devoted at the national level to the creation, confirmation or organization in each country of a national center for the diffusion of documentary material produced within that country. They also selected a number of immediate goals of their cooperative work. Included among the latter are an inventory of organizations active in the fields envisaged for research; continued development of documentary information exchanges in their present form; delimitation of the field covered by regional and urban planning and housing; initial studies for design of a multilingual glossary, building on work already accomplished elsewhere, and leading to the establishment both of a list of descriptors and an analytical information sheet; and establishment of a preliminary model for such a standard information sheet. In view of the fact that the general program closely paralleled the functions of the United Nations Institute for Documentation to be established in New Delhi in the near future, it was decided to maintain close liaison with that body. Meanwhile, international and national organizations which are members of the group were asked to support its research projects, and the group as a whole is to be called together for further deliberations at such time as progress on the various studies justifies the call.

Members of the Executive Committee, which met in October to review progress to date, include the International Association of Planners; the European Coordination Center for Research and Documentation in the Social Sciences; the International Committee for Documentation in the Social Sciences; Inter-centre, International Center for Terminology of the Social Sciences; and the United Nations Center for Housing, Building, and Planning.

Organizations sending observers to the executive committee meetings include the International Federation of Documentation; the Organization for Economic Cooperation and Development; the World Society of Ekistics; and the International Union of Local Authorities.

Further information concerning the group may be obtained from Mr. M. Menou, of the Permanent Secretariat, at 11, rue Chardin, Paris 16e, France. (SK)

415. AMERICAN-YUGOSLAV PROJECT IN REGIONAL
AND URBAN PLANNING STUDIES

The American-Yugoslav Project, which officially began in the summer of 1966, was formed to establish effective professional collaboration between American and Yugoslav specialists in the field of regional planning. The initiators of the project were the Urbanisticni institut of Slovenia and Cornell University. It is funded by the Ford Foundation, the U. S. Department of State, the Yugoslav Federal Council for the Coordination of Scientific Research, and other Yugoslav sources.

The project has the dual goals of research and training. Members conduct research in related areas which contribute to an overall regional planning framework through the example of a case study, the Ljubljana urban region. It is also attempting to evolve a method of work that recognizes the interdisciplinary character of the field. Participation in this research is designed to perform a training function for young Yugoslav and American professionals, and most particularly to assist in the training of professionals in regional planning.

Publications and further information are available on request from Zora Debenak, Urbanisticni institut, Titova 98/II, p.p. 346, Ljubljana, Yugoslavia. (RTR)

416. COMPREHENSIVE TEAM-WORK RESEARCH ON
THE URBANIZATION PROCESS (SWEDEN)

Extensive research on the urbanization process has been initiated in Sweden through a long-term program which includes a number of separate projects conducted at various university departments of Human and Economic Geography.

The project has been designed on a broad, regional basis in order to consider the existence of numerous dependent conditions between urban districts (e.g. functional dominance of subordination, competition for investments, employment, and labor), and because a comparative approach provides a primary means for evaluating the characteristics inherent in the environments for economic activity and daily life provided by the network of large and small urban regions. The project is intended to include investigations into regional structure, the pros and cons of different types of town or

region, and the interplay between regions.

The project is described in a research programme prepared by Torsten Hagerstrand, University of Lund. The work is financed and coordinated by the Tri-Centennial Fund of the Bank of Sweden. (IL)

New Periodicals

417. JOURNAL OF THE INTERAMERICAN PLANNING
SOCIETY

This new quarterly (Revista de la Sociedad Interamericana de Planificacion) is designed to serve the interests of all who are concerned with planning in Latin America. Each issue will be devoted to a particular planning topic, physical, economic, social or political-administrative. The annual subscription is \$6.00, including postage and handling. Address inquiries to Departamento de Administracion Publica y Planificacion, Division de Ciencias Sociales y Economicas, Universidad del Valle, Cali, Colombia. (NS)

418. STUDIES IN PROGRESS IN COLOMBIA

This newsletter (Investigaciones en Progreso en Colombia), edited by Edgar Cordoba Mendosa, brings to the attention of the public major studies in progress in Colombia in various fields, social, economic, biological, etc. Address inquiries to Escuela Interamericana de Bibliotecologia, Universidad de Antioquia, Medellin, Colombia. (NS)

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